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THE ECONOMIC PERFORMANCE
OF PUBLIC FACILITIES
IN YERBA BUENA CENTER

Prepared for THE REDEVELOPMENT AGENCY OF THE CITY AND COUNTY OF SAN FRANCISCO

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ECONOMICS RESEARCH ASSOCIATES
LOS ARGELES, CALIFORNIA

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THE ECONOMIC PERFORMANCE OF PUBLIC FACILITIES IN YERBA BUENA CENTER

Prepared for
THE REDEVELOPMENT AGENCY OF THE
CITY AND COUNTY OF SAN FRANCISCO
May 17, 1965

ECONOMICS RESEARCH ASSOCIATES

LOS ANGELES, CALIFORNIA

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The Economic performance of public facilities in 1965.

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INTRODUCTION

In July 1964, the Redevelopment Agency of the City and County of San Francisco contracted with Economics Research Associates to evaluate the economic and financial performance of certain public facilities proposed for the Yerba Buena Center Redevelopment project. Major components of the public facilities program include: a sports arena with 14,000 permanent seats, exhibit and convention facilities comprising 300,000 net square feet coupled to the arena, two legitimate theaters with seating capacities of 1,800 and 2,200 seats, a museum of 75,000 square feet, and two parking garages with capacities of 1,900 and 1,400 vehicles. It is envisioned that these facilities would not only provide a cultural and community service focal point for San Francisco, but would also set the tone for subsequent redevelopment and rehabilitation of the south of Market Street area.

Because of the scope of the proposed complex, the Agency also requested analyses of use and economic performance given deletion of certain facilities. A summary of these separate analyses is included in the current report, with supporting tables. Other information for these supplementary evaluations is published in appendices to the report.

Section I presents a summary of major findings of the study, and includes summaries of the two separate supplementary studies as well. Section II evaluates the physical and economic environment in which the facilities will operate. Section III examines potential use and economic performance of the sports arena and exhibit and convention facilities. Section IV covers potential use and economic performance of the two legitimate theaters, and Section V examines the appropriateness of incorporating museum activity into the complex of facilities. Section VI evaluates the performance of the two parking garages not only as service adjuncts to the major public facilities program, but also as economic entities serving daytime parking needs in the area. The final section, Section VII, develops the likely costs of the several facilities, their economic performance, and a financing program appropriate to implementation of the project.



The study was conducted by William H. Stevenson, Vice President of Economics Research Associates, under the administrative direction of Harrison A. Price, the firm's President. Assistance was provided by various staff members of Economics Research Associates and Facts Consolidated (a wholly owned subsidiary of E.R.A.) Independent consultants participating in project analyses include Dr. Robert A. Sigafoos and Paul Faberman. Advice on project financing was provided by Bruce Thorne, Vice President of William Blair and Company of Chicago.

During the course of the study, a large number of private citizens, public and private organizations, and public officials contributed most generously of their time and knowledge. Particularly valuable was the support, counsel, and advice of the Redevelopment Agency of the City and County of San Francisco and its executive director, M. Justin Herman. Special acknowledgement is due Agency staff members John Dykstra and Douglas Meyers. The cooperation of Real Estate Research Corporation as consultant to the Agency is also acknowledged with appreciation.



Section I

SUMMARY OF CONCLUSIONS

TOTAL PUBLIC FACILITIES PROGRAM

The performance of the proposed public facilities must be evaluated in relation to the environment in which they will be developed. This environment has two facets. The first of these involves the future economic vitality of the community and is useful in assessing the importance of the proposed facilities to the City of San Francisco. The second concerns the physical environment immediately surrounding these facilities in terms of its appropriateness to effective functioning of the various activities.

Although San Francisco serves as a central city, exerting an influence over a large and growing metropolitan area, suburbanization and dispersion of population and economic activities pose challenges to many of the City's traditional functions. The significance of these changes in present and likely future economic environment is twofold. First, relative declines in such activities as retailing, wholesaling, and to a lesser extent manufacturing, experienced by San Francisco in recent years point up even more the importance of service trades to the City. With hotel, lodging, and entertainment activities as critical elements of the service trades, the importance of public facilities supporting the service trades business is enhanced. New convention activity in the facilities, for example, would increase the flow of outside money to San Francisco hotels and eating, drinking, and entertainment establishments.

Second, as suburban communities continue to grow, it is likely they will develop public facilities of their own unless some of these functions are pre-empted by San Francisco through improvement of the inventory of facilities. Thus, in addition to evaluating the proposed facilities on the merits of civic need, their potential importance to the economic future of the City must also be considered.

Irrespective of either public need or economic importance, the proposed public facilities must be located in a physical environment



permitting effective functioning of activities. With implementation of the redevelopment program as contemplated, south of Market Street will provide such an environment. Not only is this area optimally located with respect to transportation and access routes, but it is also proximate to hotels and entertainment areas of the City. In the opinion of professionals in sports and entertainment operations, a Yerba Buena Center location is suitable for these activities.

Sports Arena-Convention Center

Given the environmental background, it is next possible to assess use potentials, first for the sports arena-convention center complex, and then for the two theaters. In the case of the sports arena-convention center, usage and therefore economic performance depends in large measure on the existing schedule of events in San Francisco rather than upon new events. This is true for two reasons: First, there are few activities (with the exception of certain large conventions) which might use the new facilities that are not currently represented in the City. Second, existing facilities are not booked to capacity, indicating that new events are at present not being turned away from the City because of lack of facilities. However, certain conventions that have been held in San Francisco in the past were inadequately accommodated by existing facilities, a situation which could result in their eventual loss to other cities offering superior accommodations.

In addition to the potential afforded by the local event schedule, the new facility could probably attract one or two very large national conventions per year which do not now consider San Francisco as a location. It is unlikely that this number of new conventions of large scale would be materially exceeded because of new facilities, since the number of such events in the country is extremely limited, and the number which rotate to the West Coast is even smaller.

On the basis of the event potentials noted and a critical inventory of physical capabilities of major existing facilities in the City, an event schedule for the new facility of 146 days of public use is anticipated. Added to this would be 30 days of move-in and move-out time, for a grand total of 176 days of use. The program of use would consist of 103 days of sports arena use and 43 days of convention-exhibit hall



use, plus move-in-out days. With a realistic policy of rental charges, this program of utilization would yield an annual income of \$424,500. Balanced against this income would be \$505,800 per year of operating expenses, resulting in the need for an annual operating subsidy of \$81,300.

It should be emphasized that operating subsidies are more common than operating profits in facilities of this nature. Over 66 per cent of the auditoriums, arenas, and like facilities surveyed by the International Association of Auditorium Managers showed operating deficits. It is also obvious that economic performance is only one criterion -- and not necessarily the most important one -- by which the appropriateness of such facilities is judged. Such factors as service to the community, contribution to economic base of the City either directly or indirectly, and enhancing the City's image as an activity center all must be considered. Moreover, in terms of convention facilities, it must be realized that other California cities are engaged in programs designed to increase their desirability as convention locations, and therefore competition for this business is likely to become even sharper in ensuing years.

Theaters

Two commercial theaters, one of 1,800 seats and another of 2,200 seats, are under consideration for possible inclusion in Yerba Buena Center. Just as local activities and programs of facility use provide the most conservative and realistic performance guidelines for the sports arena-convention center, performance of local theaters supplies a reasonable guide to anticipated use of the proposed theaters. Although San Francisco, in common with other Western cities, relies upon theatrical centers -- particularly New York -- for theater activity, local theater use is a reasonable indicator of the dimension of potential.

Given the dependency noted above, it is apparent that a program of theater use is conditioned for the most part by the number of plays and musicals produced on Broadway which are successful enough to take to the road and play in San Francisco. Because of uncertainties inherent in the theater business, this number may fluctuate significantly from year to year. However, the most recent experience of the Geary and Curran Theatres serves as a yardstick of potential. At present the



City supports about 20 to 25 weeks of use for the Geary, and 30 to 35 weeks of use for the larger Curran. Assuming that the new theaters replace the Geary and the Curran, because their sites are put to more economic uses, the existing usage patterns of these two operations are likely to provide the bulk of the event schedule for the two new theaters. Since Civic Light Opera books 28 weeks in the Curran at present and is obviously the principal tenant, the contemplated expansion of their schedule to 35 weeks boosts the use program of the proposed 2, 200-seat theater accordingly. Thus, a program of 42 weeks of use per year is a reasonable projection for this larger theater. The 1,800-seat theater, however, is unlikely to achieve more than 25 weeks of use per year over the long term, since it has no guaranteed tenant and depends almost entirely upon outside productions.

It is assumed that management of the theaters will follow a modified four-walls rental policy similar to that recently evolved for the Los Angeles Music Center. If so, the use program outlined above would yield incomes of \$176,400 per year for the 2,200-seat theater and \$82,400 for the 1,800-seat theater, for a total annual income of \$258,800. Since the two theaters could share certain management and administrative costs, total operating expenses are estimated to be \$331,400 per year. An annual operating loss of \$72,600 would therefore be evidenced.

There is insufficient demand to support three new theaters in San Francisco. If the recently proposed theater adjoining the Opera House were to materialize under public subsidy, its usage and economic development would almost surely be at the expense of the Yerba Buena Center theater configuration. Under these circumstances, it is unlikely that theater activity could be a viable part of Yerba Buena Center.

Museum

Aside from needed parking garages, which will be discussed in succeeding paragraphs, the final element of the public facilities program envisioned for Yerba Buena Center is a museum. At this point in planning, neither content nor concept of the museum has been developed, and therefore a forecast of attendance potential is infeasible. Museums unquestionably generate traffic and contribute to the creation



of an attractive environment. It is also pertinent that the museum itself enjoys several benefits of location within the broad gauge public facilities complex, the most important of which are environmental desirability and exposure to dense downtown pedestrian traffic. Public parking both serves and itself is served by museum attendance. (Transit connections, too, will make a museum serviceable to a more extended patronage.)

Public Parking Garages

A total of 3,300 public parking spaces are under consideration for the two central blocks of Yerba Buena Center. A 1,900-space public parking garage is proposed for the block bounded by Mission, Howard, Third, and Fourth Streets and a 1,400-space public parking garage is proposed for the sports arena-convention center block bounded by Howard, Folsom, Third, and Fourth Streets.

To function effectively, each of the public facilities requires adequate parking space, since a large portion of visitor volume generated by the event program will arrive by automobile. Since the bulk of activities envisioned occur in the evening, the parking facilities are available to service daytime demand generated by commercial and office uses within the area of their market influence. Indeed, the presence of such demand makes provision of these facilities economic, for the costs of supplying parking for events alone would be prohibitive.

Analysis of land use and economic activities within the 1,000-foot area surrounding the two garages indicates a surplus of demand over supply for monthly parking, and a surplus of supply over demand for transient parking. However, because of the desirable location of the larger garage, it is likely this facility could compete effectively for economically more desirable transient parking. Therefore 1,540 stalls of the 1,900-stall facility are allocated for this purpose, with the remaining 360 stalls being devoted to monthly parking.

The 1,400-stall garage, however, is not well situated to cater to transient demand, and therefore it is recommended that only 190 stalls be allocated for this purpose, with the remaining 1,210 stalls available for monthly parking. Considering supply and demand factors



as well as operating economics of other San Francisco garages, combined garage income is forecast at \$1,055,800 in the second or third year of operation. Operating expenses are estimated to be \$475,200, yielding operating profits of \$580,600 per year. Since it can be realistically assumed that land uses in the surrounding area will probably increase in economic utilization over time, it is likely that garage profits will also increase in subsequent years as demand swells with more intensive development of the area. Thus, the operating profits outlined above would be conservatively stated over the long term.

Operating Performance of the Total Complex

Considered as a whole, the complex of public facilities would yield income of \$1,743,600, operating expenses of \$1,315,020, and annual profits of \$428,600 before debt service. The remaining questions of economic consequence are the likely costs of building the several structures, and determining the appropriate method of financing them. Precise costs, of course, are the result of detailed engineering and architectural studies which are not appropriately accomplished at this point in the planning process. Reasonable estimates of costs can be made, however, through establishing appropriate analogies between what is envisioned for San Francisco and the costs of comparable facilities developed by other cities in the United States. Such data, of course, must be adjusted for cost differences between the various cities and San Francisco and further modified to reflect the trend of rising construction costs. It is assumed that the City would make every effort to establish the facilities promptly to avoid the higher costs. For planning purposes the year of construction is assumed to be 1967. Total costs are presented in Summary Table I.

Financing

Given the costs and income as outlined, the most adequate financial solution lies with general obligation bond financing. Using this means, annual debt service for the entire project would approximate \$2.49 million per year, with an effective cost of funds of 3.5 per cent per annum and a 40-year facility life.



Summary Table I

TOTAL PUBLIC FACILITIES PROGRAM FOR YERBA BUENA CENTER

Annual	Net Cost To City			:				$$2,024,200\frac{2}{}$
Contribution From	Lease or Sale of Air Rights					Lease income estimated by the San Francisco Redevelopment Agency from private commer- cial buildings in sports	arena block.	\$40, 400 <u>3</u> /
	Annual Debt Service			:			;	$\$1,743,600$ $\$1,315,000$ $\$428,600$ $\$2,493,2002^{2}$ $\$40,4003^{2}$
	Profit (Loss)			\$270,100			\$158,500	\$428,600
Operation	Expenses			$\$1,000,600\frac{1}{2}$ $\$$ 883,000 $\$$ 612,900 $\$270,100$			860,600 \$ 702,100 \$158,500	\$1,315,000
	Income			\$ 883,000			\$ 860,600	\$1,743,600
	Land Cost			$\$1,000,600^{1/}$			\$2,693,700	\$3, 694, 300
nated	tion Cost			\$21,482,300			\$28,066,700	\$49, 549, 000
Estimated	Construction Cost (1967)		\$ 6, 221, 000 6, 891, 200 5, 638, 300 2, 361, 200 370, 600	Subtotal		\$ 4,583,900 14,769,200 8,343,000 370,600	Subtotal	Total
	Facilities	Central Block (Mission, Howard, Third, and Fourth Streets)	1, 900-space garage 2, 200-seat theater 1, 800-seat theater Museum Plaza		Sports Arena Block (Howard, Folsom, Third, and Fourth Streets)	1,400-space garage Sports arena Convention center Plaza		

[|] Assumes that the public parking garage will carry 25 per cent of disposition value; the remainder will be carried by private development. All land values and allocations supplied by San Francisco Redevelopment Agency.
| Assumes general obligation financing for the entire project.
| Assumes general obligation financing for the entire project.
| Assumes Redevelopment Agency estimate.

Source: Economics Research Associates.



It would, of course, be possible to separate the project into those elements which might carry their own debt service (the garages), and those which require public support. Under such a scheme, the garages would be financed through revenue bonds and the balance through general obligation bonds, thus reducing the amount of the general obligation bond issue. Because the cost of financing through revenue bonds would be greater than financing through general obligation bonds, such a method would increase the effective cost of the complex to the City and its taxpayers and is therefore not recommended. Moreover, revenue bond financing requires an increase in parking rates in order to be feasible. Estimates of the increase needed are given in Section III of the summary.

Public subscription could also reduce the total bond requirements involved, as occurred in Los Angeles with the newly opened Music Center and in New York with Lincoln Center for the Performing Arts. This possibility should not be ignored.

PUBLIC FACILITIES PROGRAM WITHOUT THEATERS AND MUSEUM

Exclusion of theater and museum activities from the public facilities envisioned for Yerba Buena Center affects the program in at least two ways. First, of course, is shifting the emphasis of the complex toward larger events and crowds commonly associated with sports arena activities. Second, the revised scope of activities focuses greater importance upon economic returns from air rights above the 1,900-stall garage, since removal of the theaters and the museum planned for construction above the garage broadens air right opportunities.

Of greater significance, revision of the scope of activity reduces project costs. Whereas the original cost estimate for the complete complex is in excess of \$53 million, the cost without theaters and museum is estimated to be \$38 million. Assuming that general obligation bond financing is the most appropriate means of funding a project of this scope, debt service would be reduced from \$2,493,200 for the original configuration to \$1,795,900 for the revised scope of activity.

Of equal importance is that the reduction in concept does not materially affect operating profits of the configuration. The gain in



operating profit achieved by eliminating theater losses is slightly less than offset by the loss of operating profits from reduced garage activity. Thus, although the original configuration shows an annual operating profit of \$428,600, the revised configuration shows an annual operating profit of \$437,400 -- an insignificant, although favorable, difference. It is therefore obvious that the net annual cost of the facilities to the taxpayer is substantially less without the theaters and museum since debt service is reduced by approximately \$697,000 per year and yet income does not materially change.

Summary Table II sets forth the economic performance of the facilities without the theaters and museum.

ECONOMIC PERFORMANCE OF 1,900-STALL GARAGE ALONE

Summary Table III reviews the economic performance of a 1,900-stall public parking garage proposed to be developed in the block bounded by Mission, Howard, Third, and Fourth Streets in the absence of the other proposed facilities. It is anticipated that the new garage would be operated by the City and County of San Francisco in similar fashion to the operation and management of other civic garages.

The City generally follows a policy of setting parking rates at each garage at a level to cover operating costs and debt service. Thus, given the cost of a facility, feasibility becomes a function of rates attainable within the framework of demand. The land use program contemplated will generate sufficient demand to permit allocation of 1,540 stalls to transient service, and indications are that a 45 per cent transient stall utilization ratio will be experienced. The remaining 360 stalls will be devoted to monthly parking.

Given the demand factors noted, and the fact that the garage will cost approximately \$7.6 million (including land) in 1967, it becomes apparent that the 15 cents per hour rate structure currently prevailing in the area is inadequate if the facility is to be self-supporting. Even if the garage were to be financed with a general obligation bond issue, a parking rate of 20 cents per hour would be needed for the facility to cover all expenses. If revenue bonds are used, a 30 cents per hour



Summary Table II

PUBLIC FACILITIES PROGRAM FOR YERBA BUENA CENTER WITHOUT THEATERS AND MUSEUM

Annual Net Cost To City			:			;	$$1,318,100\frac{2}{}$
Contribution From Lease or Sale of Air Rights					Lease income estimated by the San Francisco Redevelopment Agency from private commer- cial buildings in sports	arena block.	$$40,400\frac{3}{}$
Annual Debt Service			:			;	$\$1,367,800$ $\$930,400$ $\$437,400$ $\$1,795,9002^{2}$ $\$40,4003^{2}$
Profit (Loss)			\$278,900			\$158,500	\$437,400
Operation Expenses			\$228,300			\$702,100 \$158,500	\$930,400
O			\$ 507,200 \$228,300 \$278,900			\$ 860,600	\$1,367,800
Land Cost			\$ 6,591,600 \$1,000,600 <u>1</u> /			\$2,693,700	\$3,694,300
Estimated struction Cost (1967)			\$ 6,591,600			\$28,066,700	\$34, 658, 300
Estimated Construction Cost (1967)		\$ 6,221,000 370,600	Subtotal		\$ 4,583,900 14,769,200 8,343,000 370,600	Subtotal	Total
Facilities	Central Block (Mission, Howard, Third, and Fourth Streets)	1, 900-space garage Plaza		Sports Arena Block	1, 400-space garage Sports arena Convention center Plaza		

 ^{1/} Assumes that 25 per cent of the disposition value will be carried by the garage; the remainder by private development. All land values and allocations supplied by the San Francisco Redevelopment Agency.
 2/ Assumes general obligation financing for the entire project.
 3/ San Francisco Redevelopment Agency estimate.

Source: Economics Research Associates,



Summary Table III

ECONOMIC PERFORMANCE OF A 1,900-STALL GARAGE

Annual Net Profit	To City_		$$108,500\frac{2}{}$	$37,200\frac{3}{2}$	42,8004/
Annual Debt	Service		\$551,0002/ $$442,5002/$ $$108,5002/$	$442,500\frac{3}{}$	355,5004/
Profit	(Loss)			$479,700\frac{3}{}$	$398,300\frac{4}{4}$
Operation	Expenses		\$994,5002/ $$443,5002/$	$366,900\frac{3}{2}$	$300,300\frac{4}{4}$
	Income		$$994,500^{2}/$	$846,600\frac{3}{}$	698, 600 <u>4</u> /
	Land Cost		$$1,000,600\frac{1}{2}$		
Estimated Construction	Cost (1967)		\$6,591,600		
	Facilities	Central Block (Mission, Howard, Third, and Fourth Streets)	1,900-space garage		

Source: Economics Research Associates.

Assumes that the public parking garage will carry 25 per cent of disposition value; the remainder will be carried by private development. Land value supplied by San Francisco Redevelopment Agency.

Revenue bond financing with facility providing its own margin of safety (30 cents per hour rate).

Revenue bond financing with margin of safety secured from other city funds (25 cents per hour rate). 7|8|4|

General obligation bond financing (20 cents per hour rate).



rate would be necessary if the facility were required to provide surplus revenue sufficient to make the bonds marketable. The range of rates noted is not only reasonable, but attainable under competitive circumstances. From a practical standpoint, feasibility of a new garage, therefore, rests upon the willingness of the City to establish a higher parking rate for both the 1,900-stall garage and the existing Fifth and Mission facility.

Appendix Tables A-I, A-II, and A-III present detailed calculations covering financing and operation of a 1,900-stall garage.



Section II

THE ENVIRONMENT OF YERBA BUENA CENTER

Understanding the environment in which the public facilities of Yerba Buena Center will function is important from two points of view. First, environment conditions, in no small measure, potentials of both public use and economic performance of the various facilities. Second, evaluation of environmental factors lends perspective to an understanding of the role of these facilities in the Bay Area, and of their importance to San Francisco.

In-depth analysis in this report of either economic base and economic environment or physical environment would be redundant. This ground has been thoroughly plowed by others, and their results are public documents. Economic structure of the area has been dissected by such highly qualified organizations as the University of California, the United States Department of Commerce's Office of Area Development, the United States Army Corps of Engineers, Stanford Research Institute, and Arthur D. Little, Inc., to name but a few. Physical aspects of environment have been rigorously analyzed by the San Francisco Redevelopment Agency for the south of Market Street area, and more generally for the City at large by the San Francisco Department of City Planning.

Studies and documents of these and other organizations and agencies have been reviewed as prerequisites to the present analysis. The following material, however, will recap only the highlights of data pertinent to assessing either potentials of the facilities or their importance to San Francisco. Covered first will be demographic and economic evidence. This will be followed by analysis of attributes and shortcomings of the Yerba Buena Center area's physical environment as a location for the proposed facilities and activities.

THE ECONOMIC ENVIRONMENT

With the exception of the nation's capitol, it is probable that San Francisco enjoys a greater sphere of influence than any city of comparable size in the country. To be sure, New York, Chicago, or Los Angeles all command greater resources and exert economic and cultural influences beyond their boundaries, but each of these cities also has an enormous population base. San Francisco, on the other hand, has less than three-quarters of a million citizens and is not only the central city for the nine-county Bay Area, but also the social, economic, and cultural focal point for most Californians living north of the Tehachapi Mountains.

Although this greater area of influence comprises almost 60 per cent of the state's land area and 40 per cent of its population, it is within the confines of the nine Bay Area counties that San Francisco's role may best be understood. This results from several factors. First, these nine counties represent the bulk of Northern California population at present and will probably increase their relative importance in future years compared to the more rural areas. Second, proximity alone makes Bay Area residents a more readily available market for events and activities staged in the City. Finally, the changing role of San Francisco within this densely populated complex is indicative of changes in its sphere of influence in the larger area.

One of the more important factors indicating a shift in the relationship between San Francisco and its surrounding environment is population distribution. Table I shows populations of the nine-county Bay Area projected through the year 2000, based on U.S. Department of Commerce studies. The table, which lists the population of each Bay Area county, indicates that at the time of the 1960 census, San Francisco was the second largest county in the area, containing slightly more than 20 per cent of the population. By the year 2000, however, San Francisco County will be only the fifth largest county in the Bay Area complex, with its population comprising slightly more than 11 per cent of the area's total in spite of a numerical population gain in the City. Physical restrictions upon land availability preclude San Francisco from enjoying the same dimension of population growth expected for surrounding counties. If data were introduced showing Bay Area counties' populations in 1940 and 1950, the differences in growth shown in the table would appear as extensions of long term trends.

Table I

POPULATIONS OF SAN FRANCISCO BAY AREA COUNTIES, 1960-2000

	$\frac{1.960^{\frac{1}{2}}}{}$	19702/	1980 <u>2</u> /	1990 <u>2</u> /	20005/
Bay Area Total	3, 638, 900	4, 270, 000	5, 370, 000	6,870,000	8,840,000
San Francisco Alameda	740,300	850,000	900,000	940,000	980,000
Contra Costa	409,000	480,000	630,000	860,000	1, 180, 000
Napa Napa	65,900	80,000	120,000	320,000 180,000	280,000
San Mateo	444,400	460,000	660,000	840,000	1, 100, 000
Santa Clara	642,300	820,000	1,070,000	1, 420,000	1,860,000
Solano	134,600	160,000	220,000	330,000	450,000
Sonoma	147,400	190,000	280,000	420,000	610,000
San Francisco's share of area population	20.3%	19.9%	16.8%	13.7%	11.1%

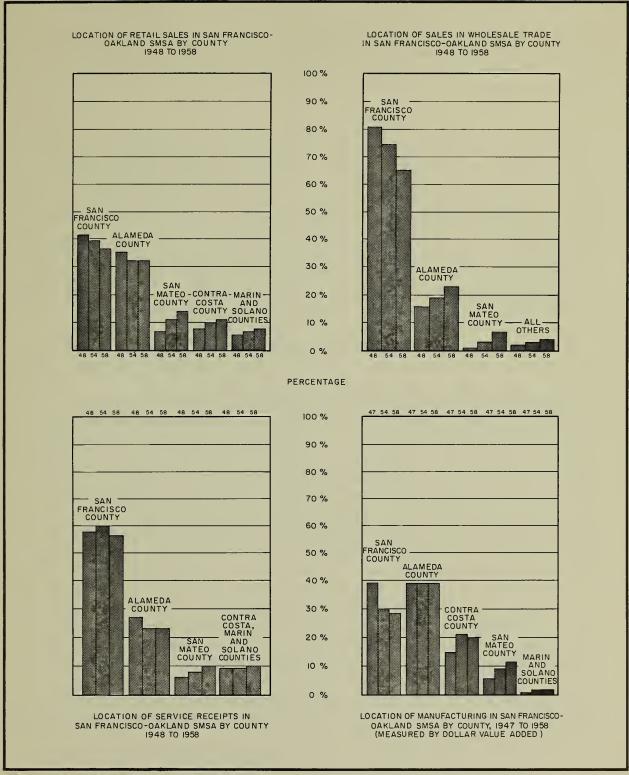
Projections by Office of Area Development, U.S. Department of Commerce. U.S. Census count - April 1, 1960.

Source: As noted in Footnotes 1 and 2.

Concomitant with and no doubt partially caused by the long term shifts in the Bay Area's population distribution and density are declines in relative importance of retail and wholesale sales activity, as well as in dollar value added by manufacturing. These declines are depicted in Figure 1, which shows San Francisco's position relative to that of other counties in the San Francisco-Oakland Standard Metropolitan Statistical Area. The figure indicates that only in the area of service trades has the City avoided a deteriorating position. Furthermore, future retail and wholesale activity may be expected to follow the general pattern of population noted for the Bay Area at large, since these activities are functionally dependent upon population densities. Thus San Francisco's share of these economic activities will probably continue to decline in future years. Whether San Francisco will continue to decline in relative importance as a manufacturing center in the Bay Area is problematical, but in any event it seems certain that the role of service trades, the remaining major sector of the economy, will loom larger in importance to the general economy of the City. Major elements of service trade receipts in turn rest on hotel, entertainment, and recreation activities of various kinds. Additional perspective on the likely future importance of these activities to San Francisco is given by the following quotation from Economic Trends in the San Francisco Bay Area by Orville F. Poland of the Institute of Governmental Studies of the University of California, Berkeley:

"There is evidence that San Francisco will continue to have a substantial economic base for the future. Nevertheless, it has experienced some relative decline in most economic functions, and a fairly substantial erosion of its relative position in others. These declines raise the question of whether San Francisco may anticipate by 1980 some of the economic decay presently found in older cities of the East. Already there has been an absolute decline in population in San Francisco, Oakland, and Berkeley. Will absolute declines in economic activity follow, as has occurred elsewhere?

''Oakland's position is somewhat different from San Francisco's. Oakland's base is more heavily in manufacturing and less in services than San Francisco's.... Apparently San Francisco's prominence for financial administration, for prestige shopping



SOURCE: U.S. CENSUS OF BUSINESS AND U.S. CENSUS OF MANUFACTURES.

Figure 1
SELECTED ECONOMIC STATISTICS,
SAN FRANCISCO BAY AREA

and entertainment will make it possible for the city to retain its commercial activities. Oakland, on the other hand, may face more serious competition with outlying areas."

Thus, without doubt service trades and those activities supporting them will be of increasing significance to future economic growth in San Francisco. Since the facilities of Yerba Buena Center either strengthen the service trade base directly through entertainment functions, or indirectly by aiding hotels to service conventions, their importance to the City is enhanced. If San Francisco were less reliant upon growth in service trades to provide economic health, the importance of Yerba Buena Center's facilities could be assessed entirely on the basis of their additions to the City's cultural and recreational facilities program. With significant economic reliance on service trades, the public and semi-public facilities of the center assume greater weight.

A second facet of past and likely future shifts in population and economic activity within the Bay Area is also pertinent. As other areas increase population densities and gain economic stature, it is likely they will expand their inventory of public facilities, thus reducing their dependence upon facilities of the central city. Growing populations and increasing wealth will sharpen the competitive edge of outlying cities in their unquestioned efforts to pre-empt events and attendances which heretofore may have been the prerogative of San Francisco. Other communities both inside and outside the Bay Area are likely to have facilities enabling them to compete for at least certain types of events now held in the City. This competition will probably be most keenly felt in convention activity, although entertainment and cultural activities are certainly not immune.

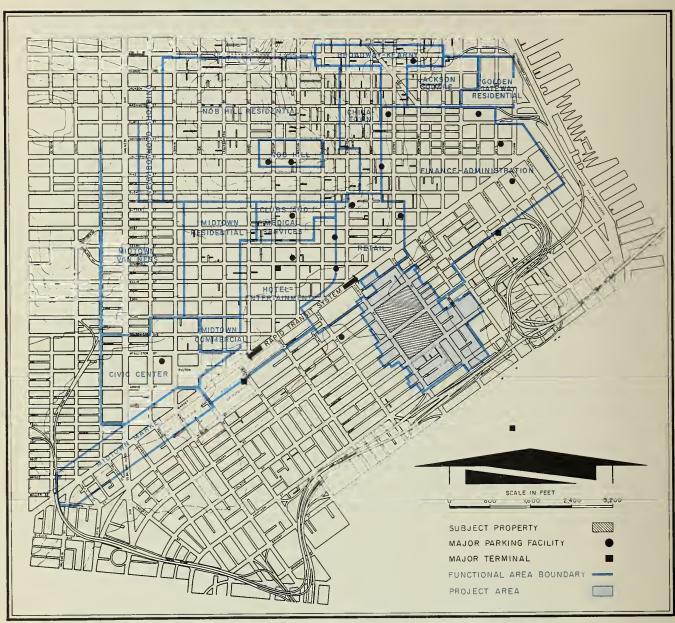
Before moving to an evaluation of physical assets and liabilities of the south of Market area, a final aspect of population growth should be evaluated. It is often assumed that a growing metropolitan area population a priori means increased attendance potentials for spectator activities. Evidence does not support this assumption. Although it is certainly true that major spectator events require large metropolitan areas for support, there is little correlation between growth of population and growth in attendance. Records of virtually every major league spectator team, whether football, baseball, basketball,

or hockey, show attendance patterns which fluctuate widely in spite of constant growth in the population base from which they draw their fans. Thus, for purposes of projecting attendance at various activities later in the study, little importance is attached to the growth rate prevailing in the area.

THE PHYSICAL ENVIRONMENT

The physical aspects of the Yerba Buena Center location may be evaluated in two ways. On one hand, the site's relationship to specific and desirable facets of the surrounding environment may be appraised. On the other hand, adequacy of location may be measured in terms of the alternative locations available for the various activities, and the advantages and disadvantages of these locations compared with the Yerba Buena Center site. For the most part, absolute rather than comparative evaluations are appropriate since with the exception of locating theater activities in Civic Center, no serious proposals of alternative location have been put forth.

Figure 2 shows the location of the proposed facilities in Yerba Buena Center in context with the major functional areas of San Francisco and downtown patterns of access and transportation. Generally, each of the major functions of Yerba Buena Center's facilities (spectator activities, cultural activities, and convention activities) have common criteria conditioning a desirable location. These criteria are: (1) superior access to population centers, (2) convenience to public transportation, (3) adequacy of parking, (4) proximity to hotel and entertainment areas, and (5) compatibility of surrounding land uses. Examination of the figure indicates that Yerba Buena Center is proximate to both hotel and entertainment areas of the City. Moreover, the site enjoys enviable access to population centers in its proximity both to major freeway systems and to the rapid transit system. It is also interesting to note in this regard that the Southern Pacific Railroad depot, the Greyhound Bus depot, and the terminus of the City's public transportation system lie closer to Yerba Buena Center than to any other major parcel of land in San Francisco. Parking adequacy and compatibility of surrounding land use, however, are less obvious from the figure.



SOURCE: SAN FRANCISCO DEPARTMENT OF CITY PLANNING.

Figure 2

RELATIONSHIP OF PROJECT AREA TO FUNCTIONAL AREAS OF SAN FRANCISCO

It is axiomatic that the activities envisioned for Yerba Buena Center will require a large amount of parking space to accommodate patrons. Current plans call for development of 3,300 public parking spaces in garages to be made part of the complex. Thus parking adequacy is assured for all the center's various activities, and the parking situation may be termed ideal.

A second facet of parking relates to comparative locational values between Yerba Buena Center and Civic Center as a site for theater. Quite obviously theater parking demand would be virtually the same regardless of where the theater is located. In fact the current proposal for development of theater activity in Civic Center includes construction of a parking garage. Although theater parking demand is the same in either location, the economics of meeting this demand are decidedly different. This is because theater use is largely an evening activity, leaving the parking facilities available for other daytime uses. Daytime uses, in fact, make the provision of garage space economic, and the absence of daytime demand usually makes construction of parking garages uneconomic.

An evaluation of potential daytime transient space use for Yerba Buena Center versus Civic Center may be made by comparing the transient utilization of Fifth and Mission Street Parking (near Yerba Buena Center) with the Civic Center Garage (near the proposed Civic Center Theater). In the former, transient parking space utilization is in excess of 50 per cent, whereas in the latter utilization is 17 per cent, based on 1963 data. Appendix Tables B-I, B-II, and B-III show comparative performance of these and other San Francisco garages and support the above figures. It may be concluded that the economics of providing additional parking space in the Civic Center area are at least open to question. It seems unlikely that garage space provided for a theater in Civic Center will achieve sufficient daytime transient utilization to break even. On the other hand, the parking garages proposed for Yerba Buena Center will generate substantial revenues (see Section VI of the report) supporting the entire public facilities program.

In evaluating the compatibility of surrounding land uses, it must be remembered that the public and semi-public facilities envisioned are the heart of a massive alteration in land use. As such, they will be surrounded by entirely different land uses than those presently existing. New commercial activity and office space is programmed for the surrounding environment which would largely remove the stigma of undesirability currently attached to the area. The proposed new facilities, therefore, will not be operating in an environment conditioned by "skid row" but in one of highly desirable land uses.

It is significant to note that knowledgeable theater promoters, impresarios, and others obtaining their livelihood in the culturally sensitive theater business are entirely unconcerned about a south of Market Street location for theater activities. The consensus of professional opinion is that such a location would certainly be no detriment to successful staging of performances given implementation of the proposed redevelopment program. It is also pertinent that professionals in the theater business are totally unimpressed with the idea of creating a "cultural complex." Their more immediate interest is in a reasonably satisfactory program of compatible land uses rather than in the presence or absence of neighboring cultural facilities. Public viewpoints, however, may differ considerably.

Finally, it should be noted that if a city has need for new public facilities, this need provides a dual opportunity not only to erect desirable facilities but also to locate the new facilities in a way which solves or helps solve other municipal problems. The dimension of need for the various public facilities in question will be measured in succeeding sections of the report. It is the function of civic judgment, not research, to determine whether the dimension of need is sufficient to warrant action. If action is appropriate, a south of Market Street location is not only satisfactory to the optimum function of the facilities, but also provides an opportunity to help solve a major land use problem of the City.

Section III

PROJECTED USE AND ECONOMIC PERFORMANCE OF A SPORTS ARENA AND EXHIBIT-CONVENTION FACILITY

Future use and economic performance of a sports arena and exhibit-convention facility may be projected from analysis of three sets of factors. First, and perhaps most important, is the calendar of existing events in the San Francisco area, and the degree of community support accorded these events. Second, is the complex of public and private facilities of the City which house the events and activities, and the role of the new Oakland Coliseum-Arena as a competitor. Capacity, physical adequacy, policy of operation, and rental rates of the various facilities must be determined. The final set of factors consists of new event potentials given construction of the proposed 14,000-seat arena and 300,000-square foot exhibit-convention facility.

Existing events inadequately housed combined with new events yields total use potential for the arena and exhibit-convention hall. Revenue, expense, and operating profit or loss of the facilities can then be determined. Questions of facility cost and financing are more appropriately treated in the final section of the report.

Given the arena and exhibit complex envisioned, three general types of events are of primary concern. The first of these consists of indoor sports. The second comprises a heterogeneous list of miscellaneous events ranging from consumer shows, meetings, and circuses to hobby shows and variety or headliner programs. The final category consists of conventions and trade shows.

SCHEDULE OF EVENTS HELD IN SAN FRANCISCO

Sports Events

Table II is a seasonal calendar of sports events held in San Francisco during a typical year. The table shows that the City's

Table II

SPORTS EVENTS HELD IN SAN FRANCISCO - TYPICAL YEAR

			Fwent Dave	v		
	Total		(m)			Principal
	Year	Winter	Spring	Summer	Fall	Facility
Baseball	92	;	39	33	3	Candlestick Park
Football (professional)	6	;	i I	3	9	Kezar Stadium
Dasketball Professional	35	20	i i	Т	14	Civic Auditorium
College	15	9	!	;	6	U.S.F. Gvm
Exhibition	2	2	1	i i	1	Cow Palace
Ice hockey	35	19	;	;	16	Cow Palace
Boxing	2	2	I I	;	1	Civic Auditorium
Wrestling	15	3	4	6	2	Cow Palace
Roller derby	35	9	12	17	;	$\begin{cases} Cow \; Palace \frac{1}{l} / \\ Kezar \; Pavilion \end{cases}$
Indoor track	2	2	;	!	;	Cow Palace
Rodeo	5	i i	;	1	5	Cow Palace
Equestrian	13	:}	:	m	:	Cow Palace
Total	234	09	55	09	59	

1/ Seven events held in Cow Palace.

Source: Economics Research Associates,

234 sports events are quite evenly distributed throughout the four seasons. Professional baseball dominates spring and summer activities, of course, with professional ice hockey and professional basketball sharing the bulk of the winter sports program. Along with professional football, hockey and basketball also represent sports offerings in the fall. Thus, every major professional sport is represented in the City. Moreover, the seasonal distribution of activities leaves little room for the entrance of new activities except in direct competition with established events.

Comparing the schedule of San Francisco sports events with schedules of other cities indicates the only significant program deficiency is collegiate athletics. Although the University of San Francisco and San Francisco State College feature athletic programs varying in emphasis, other universities and colleges in the Bay Area capable of attracting large crowds to athletic events have adequate facilities on campus. Thus, they are unlikely to play a significant number of games in San Francisco in a public facility. It would appear, therefore, that the deficiency in collegiate athletic offerings in the City will probably continue.

Given the difficulties of establishing a sporting event calendar of broader scope (either in terms of new events or expanded schedules of existing events), enhancing the importance of sports must rest on upgrading team quality and attracting larger crowds. Subsequent paragraphs will explore this possibility for each type of event as well as presenting data and information on performance patterns. In context with succeeding material, it should be remembered that attendance for any given sporting event is typically cyclical and depends not only on the fortunes of the team involved, but also on the general level of public awareness of the sport. Some sports achieve immediate public acceptance when introduced to an area only to disappear from the scene in a few years. Others start slowly and gain public acceptance over time.

Professional Basketball

Professional basketball, a relatively new spectator sport in San Francisco, has yet to achieve any substantial measure of public support. Relocating from their former Philadelphia home, the newly created San Francisco Warriors are experiencing their second year of disappointing attendance. In their first season (1962-1963) the

Warriors played in the Cow Palace and at U.S.F., drawing average crowds of less than 2,500 spectators in spite of having a top box office attraction in Wilt Chamberlain.

The 1964-1965 season was played for the most part in the newly refurbished San Francisco Civic Auditorium with little or no improvement in attendance. Table III shows reported attendance per Warrior game and indicates the only time the team drew respectable crowds was when playing the league-leading Boston Celtics. It should also be pointed out that attendance data given is total attendance and does not necessarily represent paid admissions. Since most sports promoters distribute complimentary tickets as a means of building loyal fans, it is likely that the Warriors' paid attendance is somewhat, if not substantially, below the attendance figures given. Poor attendance patterns in context with a recently announced reorganization of the team makes the future position of the sport in San Francisco unclear at this time.

Comedy-exhibition basketball, on the other hand, has achieved a greater measure of public support. The Harlem Globetrotters, one of the country's two outstanding exhibition teams, plays a four-game schedule in the Bay Area with two games in Oakland and two games in San Francisco. A consistent crowd pleaser for more than two decades, the Globetrotters have drawn crowds of approximately 5,000 persons during recent performances in the City.

Professional Ice Hockey

In contrast to professional basketball, professional ice hockey has achieved a somewhat more enthusiastic response from Bay Area spectators. The Seals, San Francisco's representative in the Western Hockey League, have averaged between 4,000 and 5,000 fans per game played at home since their entry into the area. This compares with average attendance per game in excess of 7,000 persons achieved by the Los Angeles Blades, and approximately 8,000 persons per game for the Portland Buckeroos.

Peak attendance for a regular season Seals game is believed to be slightly more than 8,000 persons. Precise attendance data for the 1964-1965 season are unavailable, although management indicates this

Table III

1964-1965 ATTENDANCE PER GAME,
SAN FRANCISCO WARRIORS

PROFESSIONAL BASKETBALL TEAM

October 23 3, 100 December $5^{2/}$ 5, 100 October $27^{1/}$ 1, 100 December 8 1, 200 October 31 3, 200 December 11 1, 100 November 4 2, 900 December 12 1, 200 November 6 2, 500 December 18 2,000 November 8 1, 700 December 20 4, 300 November 17 3, 900 December $22^{1/}$ 2, 700 November 21 4, 100 January $8^{2/}$ 5, 900 November 23 1, 400 January 15 1, 600 November $28^{2/}$ 5, 500 January 16 1, 700 December 1 1, 900 January 26 2, 700 December $2^{1/}$ 2, 100 January 28 3, 300	Date	Attendance	<u>Date</u>	Attendance
December 1, 900 January 26 2,700	October 23 October 27½/ October 31 November 4 November 6 November 8 November 17 November 21 November 23	3,100 1,100 3,200 2,900 2,500 1,700 3,900 4,100	December 5 ² / December 8 December 11 December 12 December 18 December 20 December 22 ¹ / January 8 ² /	5,100 1,200 1,100 1,200 2,000 4,300 2,700 5,900
December $2\frac{1}{2}$ 2.100 January 28 3.300	December 1	·	•	•
November 6 2,500 December 18 2,000 November 8 1,700 December 20 4,300 November 17 3,900 December 22½ 2,700 November 21 4,100 January 8½ 5,900 November 23 1,400 January 15 1,600 November 28½ 5,500 January 16 1,700 December 1 1,900 January 26 2,700	October 31	1,100 3,200	December 8 December 11	1,200 1,100
December $42/$ 5, 900 January 30 4, 900	December $2\frac{1}{2}$	2, 100	January 28	3,300

Source: San Francisco Warriors.

^{1/} Games played outside San Francisco.

 $[\]frac{2}{2}$ Games played against league champions.

year's attendance is down from the preceding year's. As with professional basketball, paid attendance is somewhat less than reported attendance due to the practice of dispensing complimentary tickets as a promotional device.

League officials are enthusiastic about prospects for growth in both stature and attendance of professional ice hockey in the West. Conferences have been held with the National Hockey League for the purpose of establishing major league hockey in the West. Whether negotiations will be successful is not known, nor is the impact of major league hockey upon prevailing attendance patterns predictable. If major league hockey were to be established, there is little question that attendance figures would be boosted above existing records. It seems reasonable to assume, however, that even with the advent of major league hockey, San Francisco would not achieve for some time the attendance levels of Eastern teams playing in areas with a hockey tradition of many years.

Boxing

As a spectator sport, boxing appears to be at a low ebb both in the Bay Area and nationally. Problems besetting the sport include the absence of name competition, lack of financing, and the recent spate of scandal and ring deaths. The fact that no events were promoted in San Francisco in 1963 bears evidence of boxing's currently low spectator status. Two cards, however, are listed for promotion in Civic Auditorium in 1964-1965, breaking the one-year drought in activity.

In 1962, two cards were promoted at Cow Palace, drawing respectable attendances of 6,200 and 5,200 fans. On the other hand, six cards promoted in Oakland in the same year had an average attendance of less than 1,200. The most current evidence of support for a championship bout was the more than 13,000 fans who watched the Gene Fulmer-Dick Tiger fight at Candlestick Parkin October 1962. Although boxing is likely to continue as a spectator sport in San Francisco, the number of events promoted in a given year will probably remain low. Attendance at these bouts is likely to be unspectacular except for championship events.

Wrestling

In contrast to boxing, wrestling has developed a core of fans in the Bay Area and in San Francisco yielding the highest attendance per spectator event with the exception of the San Francisco Giants. For the past several years, 15 cards per year have been promoted at Cow Palace, achieving attendances on a few occasions of 17,000 fans. Most recent attendance patterns, however, have evidenced a decline from the achievements of preceding years. Although precise attendance information for most recent matches is unavailable, average attendance per card is stated to be 30 to 40 per cent below the 1962 average attendance of 12,000 recorded by Cow Palace. Whether these declines in the current period represent a trend is unknown. It should also be remembered that attendance figures quoted are turnstile and not paid admissions.

Roller Derby

Believed similar to wrestling in appeal and in type of sports fan attracted, roller derby is currently enjoying an active position in the San Francisco sports calendar. During the most recent year, 35 roller derby events were scheduled in San Francisco, with 28 of the games being promoted at Kezar Pavilion and the remaining seven at the larger Cow Palace. The Bombers, the local team, have achieved attendances ranging between 7,000 and 10,000 fans for major events held in Cow Palace. Average attendance per event held in Kezar Pavilion is, of course, much smaller. The team also plays a certain portion of its schedule in Richmond, San Jose, and Oakland, where it is reported also to draw reasonably well.

Other Sports Events

Remaining events usually considered sports events include five days of rodeo, three days of equestrian activity, and two days of indoor track, all of which are currently held at Cow Palace. Because of the character, image, and facilities of Cow Palace, it is unlikely that equestrian and rodeo events represent serious event potentials for a new facility as long as Cow Palace is a functioning entity. Indoor track, however, does provide two days of event potential which, based on

previous performance, might achieve average attendance of 5,000 paid admissions per event day over the long term, although currently attracting almost capacity crowds.

Shows, Special Events, and Spectaculars

During a typical year, San Francisco will stage 30 to 40 miscellaneous shows, spectaculars, and special events in addition to sporting events and cultural activities such as legitimate theater, ballet, and musical events. Table IV shows a seasonal calendar of these miscellaneous activities based on 1963-1964 data.

The types of activities covered range from boat and consumer shows to circuses, hobby shows, and dog, cat, and horse shows. Of the 162 event days per year noted in the table, a marked tendency toward greater activity in spring and fall is observed. This is consistent with patterns of other cities, which usually consider such events "fillers" between the peak activities of winter sports and the summer season of outdoor recreation.

By comparing the events held in one year, but not in the other, a slight trend of gain in number of event days is observed. For example, 32 event days held in 1963 were dropped in 1964, but 42 new event days were added in 1964, for a net gain of 10 event days. However, if the types of events appearing and disappearing from the scene are evaluated, the trend is probably inconsequential. For example, 12 event days added in 1964 represent special interest events with narrow public appeal (coin shows, antiquarian book shows, folk and square dancing activity). A major ten-day event -- the World Trade Fair -- was added in 1964, but two other consumer show events -- the Ladies' Fair and the San Francisco Home Show -- were dropped in 1963. A similar pattern is observed in circuses.

In light of these data, it is reasonable to assume that San Francisco will probably not experience any marked growth in these activities. Such a stable pattern would parallel the experience of other major cities in the United States. Knowledgeable promoters agree that any given area can effectively support only a limited number of such activities. If new events are introduced, attendance per event flags, which in turn exerts a stabilizing influence upon event introduction.

Table IV

SHOWS, SPECIAL EVENTS, AND SPECTACULARS IN SAN FRANCISCO, 1963-1964

		Event Days	Days		
	Winter	Spring	Summer	Fall	Principal Facility
Boat Show	10	;	;	;	Cow Palace
G.G. Kennel Club All-Breed					
Dog Show	2	;	;	1	Cow Palace
Annual Bay Area Science					
Fair	;	5	;	;	California Academy of Scienc
Junior Grand National					
Livestock and Horse Show	;	rύ	;	ı	Cow Palace
Scout-O-Rama	!	2	;	;	Cow Palace
Furniture Fashions	1	6	;	;	Brooks Hall
A.I.I.D. Exhibition	!	$10\frac{1}{1}$;	¦	Masonic
Decorator and Hi-Fi Show	1	52/	1	;	Cow Palace
Stamp Exhibition	!	42/	1	;	Jack Tar
Senior Citizens Hobby Show	1	62/	!		Emporium
Coin and Currency Fair	;	$\frac{1}{1}$	-	4 <u>1</u> /	Hall of Flowers
Folk and Square Dance	1	$1\frac{2}{1}$	$\frac{2^{1}}{1}$	1	Kezar Pavilion
Polack Brothers Circus	;	;	3 <u>2</u> /	;	Kezar Pavilion
Ringling Brothers B&B					
Circus	;	I I	9	;	Cow Palace
Cello Brothers Circus					
(Boys Club)	!	1	31/	1	Cow Palace
Concours d' Elegance	;	:	_	;	G.G. Park Stadium
Ice Follies	;	!	;	:	Winterland
Summer Dog Show	;	;	_	1	Brooks Hall
Arabian Horse Show	;	;	2	:	Cow Palace
San Francisco Flower Show	1	∞	4	4	Hall of Flowers

Table IV (Continued)

	Principal Facility	Hilton Hotel	Brooks Hall/Civic Auditorium	Brooks Hall	Sheraton Palace	Cow Palace	Hall of Flowers	Scottish Rite Auditorium	Cow Palace	Hall of Flowers	Cow Palace	Brooks Hall-Civic Auditorium	Brooks Hall-Civic Auditorium	Brooks Hall-Civic Auditorium	Hall of Flowers	
	Fall	41/	$10\frac{1}{1}$	4,	$3\frac{1}{2}$	33	2	2	10	$1\frac{1}{2}$	$3\overline{1}/$	9	$9\frac{1}{2}$	$5\frac{1}{2}$	7	72
Days	Summer	t t	;	!	į.	;	!!	!	;	;	:	;	;	;	:	22
Event, Days	Spring	fS &	i i	1	;	;	1	;	1	-	;	1	i i	8 0	:	99
	Winter	;	i i	1	I I	I I	;	1	!	1	1	;	;	;	:	12
		Hi-Fi Music Show	World Trade Fair	Antiques Show	Antiquarian Book Show	Quarter Horse Show	Vintage Festival	Gem and Mineral Fair	Grand National Livestock	Potters Show	Winter Sports Fair	Imported Car Show	Ladies Fair	San Francisco Home Show	Golden West Cat Show	Total

1/ Held in 1964, not held in 1963. 2/ Held in 1963, not held in 1964.

Source: Economics Research Associates.

A measure of exception to these generalizations appears in the area of ice shows. Winterland Auditorium in San Francisco is the headquarters of Shipstad and Johnson's Ice Follies, which plays a 2-1/2 month performance in the City each year. The traveling Ice Capades, however, booked Cow Palace for 15 days in 1962 and achieved an average attendance per performance of 3,200 persons. In spite of this low order of attendance, the 1964-1965 calendar of San Francisco Civic Auditorium shows a similar period of booking for Ice Capades. Whether average attendance at all ice show events will drop as a result of the additional exposure is not known.

Conventions

San Francisco is well known as one of the leading convention cities in the United States, and is certainly the most important convention location in the Western region. This pre-eminent position is attributable to three factors. First, of course, is the charm and beauty of the City itself expressed in its exciting environment, night life, dining opportunities, and entertainment activities. Enabling the City to capitalize upon these assets are the more objectively measurable factors of a well developed accommodations network and a nucleus of meeting and exhibit facilities.

Accommodations

According to data supplied by the San Francisco Visitor and Convention Bureau, the bulk of convention and group business is hosted by 40 principal hotels and 54 motels with a total room complement of 11,500. Approximately 20,000 additional rooms are said to be available in the City, although they are rarely used to accommodate convention activities. The typical convention, however, requires more of a city than available accommodations. Meeting and banquet rooms as well as exhibit space are also essential. To the extent these needs are met within the accommodations network, they will be discussed in the following paragraph. Meeting and exhibit space requirements transcending the capacities of the major hotels will be discussed later.

In addition to their role as major lodging and dining facilities serving convention needs, eight first-class hotels catering to convention business furnish a large portion of meeting rooms and exhibit space for the City's conventions 1/. Meeting and exhibit space facilities of these hotels are summarized in the text table below:

	Range of	
Number of	Room	Maximum
Meeting	Capacity	Exhibit Space
Rooms	(persons)	(square feet)
5	80-540	4,400
21	50-2,500	16,570
12	30-1,300	7,150
9	35-850	4,620
15	30-700	3,870
21	25-1,200	9,070
10	20-500	3,200
22	15-3,000	19,000
	Meeting Rooms 5 21 12 9 15 21 10	Number of Meeting RoomsRoom Capacity

Source: San Francisco Convention and Visitors Bureau.

Compared with other Western cities, the impressive facilities of San Francisco's first-class hotels give the City a sharp competitive edge. Although less amenable to measurement, another factor of consequence is the relative proximity (by Western standards) of these hotels to one another. Such closeness permits large conventions to split delegations between several hotels with a minimum loss of efficiency. The advantage may be readily seen by comparing the tight cluster of San Francisco's accommodations to Los Angeles' first-class facilities, which sprawl from downtown to mid-Wilshire and on to Beverly Hills.

Convention Activity in San Francisco

Table V shows the size distribution of San Francisco conventions from 1959 through 1963 as well as the total number of conventions

^{1/} The Clift Hotel is excluded, for although it is certainly a first-class facility, it does not cater to convention business.

Table V
SIZE OF SAN FRANCISCO CONVENTIONS, 1959-1963

Number of Delegates	1959	1960	1961	1962	1963	United States Average
Under 1,000	68.2%	68.7%	79.3%	68.2%	71.6%	83.6%
1,000-1,999	16.5	17.2	11.1	14.9	13.8	8.3
2,000-2,999	7.0	6.0	0.9	3.7	5.2	2.4
3,000-3,999	7.0	3.0		2.8	3.5	1.0
4,000-4,999	1.2	1.0	0.9	0.9	0.9	1.0
5,000-6,999	2.4	3.0	2.5	3.7	2.6	0.7
7,000- 9,999			1.7	1.9		0.8
10,000 and over	1.2	3.0	3.4	3.7	3.4	1.9
Total number conventions	85	99	116	107	114	

Note: Individual items may not add to totals due to independent rounding.

Source: San Francisco Convention and Visitors Bureau, International Association of Convention Bureaus, and Economics Research Associates.

held. The table includes only those conventions which rotate location, and therefore understates total convention activity to the extent of local and area groups which might be considered captive activities of the City. Although the data show a marked trend toward an increasing number of conventions held in the City, the pattern of growth is erratic. Even less stable is the trend in size distribution of conventions. In 1959, for example, 18.8 per cent of conventions held in San Francisco had 2,000 or more delegates. This percentage dropped to 16.0 in 1960, declined further to 9.4 per cent in 1961, rose to 16.7 per cent in 1962, and then dropped again, to 15.6 per cent, in 1963.

Although it is apparent from the data that small conventions (those with less than 2,000 delegates) comprise the bulk of conventions held, the large convention is infinitely more important in terms of economic impact upon the community. Hosting the recently concluded American Medical Association convention, for example, probably had a greater economic impact upon the City of San Francisco than did hosting all 1963 conventions with less than 1,000 delegates -- and the latter group comprised 71.6 per cent of conventions held in the City that year.

San Francisco Conventions Using Exhibit Space

Table VI lists every convention held in San Francisco between 1959 and 1963 utilizing exhibit space outside hotels. The table also shows the dates of these conventions, net square footage required, days of use (including event days and move in-move out days) and size of delegation. The table shows 12 conventions using exhibit facilities outside hotels in 1959, 16 in 1960, 10 in 1961, 14 in 1962, and 8 in 1963. However, 1963 was the year Civic Auditorium, one of San Francisco's major convention facilities, was closed for remodeling (although adjoining Brooks Hall remained open). It is possible some convention activity was inadvertently discouraged in that year. The table also indicates that each convention or trade show typically reserves four days for exhibit use and requires an equal amount of move in-move out time. Larger shows, of course, require a disproportionate amount of move in-move out time.

If the relationship of exhibit space needs and size of convention delegation were developed for all conventions, the two sets of data

Table VI

CONVENTIONS IN SAN FRANCISCO REQUIRING EXHIBIT FACILITIES $\frac{1}{1}$, 1959-1963

Number of Delegates	900 1,900 7,900 32,000	, 848 3,900	3,600	2,560 3,000 400		1,000
Net Square Feet	5,900 960 38,000 97,000	18,400	40,000	8,400 50,300 7,400 4,700		8,000
Out	1.0 1.0 2.0	1.5	1.0	1.0 2.0 1.0 0.5	18.5	1.0
Event	3.0 10.0 4.0	5.0	5.0	ε 4 4 4 0	55.5	4.0
II	1.0 1.0 7.0 4.0	2.5	2.0	1.0	33.0	4.0
<u>Date</u>	9/28 -9/30 9/16 -9/25 8/31 -9/3 8/18 -8/21	8/9 -8/13 7/11 -7/17	5/24 -5/29	3/30 -4/1 3/12 -3/15 1/25 -1/28 1/17 -1/20		12/11-12/14
1959	National Symposium on Space, Electronics, and Telemetry A.F.LC.I.O. Western National Restaurant Show WESCON	American School Foods Service Association American Water Works Association	National Conference on Social Welfare American Academy of General Practice	American Orthopsychiatric Association Pacific Automotive Show National School Boards Association National Institute of Rug Cleaners	Total Year 1960	American Nuclear Society National Council of Churches of Christ

	Date	In	Event	Out	Net Square Feet	Number of Delegates
National Retail Lumber Dealers Association American Public Health	11/13-11/16	0.9	4.0	1.5	70,000	17,700
Association	10/31-11/4	4.0	4.0	1.0	16,000	3,899
American College of Surgeons	10/10-10/14	5.0	5.0	1.5	900	8,900
Air Force Association	9/21 -9/25	4.0	4.5	2.0	$60,000\frac{2}{}$	5,000
American Hospital Association	8/29 -9/1	3.0	4.0	2.0	72,200	10,200
International Congress of						
Gerontology	1	1.0	4.0	0.5	1,400	800
National Machine Accountants	/9-	•	2.5	1.0	7,400	1,300
Institute of Food Technologists	5/15 -5/19	1.0	3.5	1.0	8,500	1,400
Instrument Society of America	-5/	•	•	1.0	17,300	4,200
American Institute of Architects	18 -4/	2.0	5.0	1.5	7,300	2,900
American College of Physicians		3.0	5.0	2.0	16,100	4,300
American Camping Association	3/2 -3/5	1.5	3.0	1.0	14,100	800
Retail Paint and Wallpaper						
Association	2/20 -2/25	2.0	3.0	2.0	10,000	1,600
Western Candy Wholesalers						
Association	1/23 -1/26	1.0	3.0	1.0	4,200	800
Total Year		43.5	63.5	21.5		
1961						
American Bottlers of Carbonated						
Beverages American Bankers Association	11/13-11/16 10/15-10/18	4.0	4.5 6.5	1.0	60,300 16,800	5, 200 8, 500
American Institute of Supply Association	9/23 -9/27	1.0	1.0	0.5	13,800	1, 300

	Date	In	Event	Out	Net Square Feet	Number of Delegates
WESCON International Truck, Trailer	8/22 -8/25	4.0	4.0	2.0	94,500	1
and Equipment Show	6/28 -6/30	2.0	3.0	1.5	30,000	10,400
Association of Western Hospitals		2.5	3.0	1.5	20, 100	4,000
Administration	2/25 -2/28	3.0	4.0	1.0	36,700	3, 400
Material Handling Institute Show	2/22 -2/24	3.0	3.0	2.0	131,000	7,600
Association of Operating Room	2/132/17	3	٠,		14 000	1 800
National Automobile Dealers		•			6	,,
Association	1/28 -2/1	3.0	4.0	1.0	20,000	8, 600
Total Year		27.5	33.5	14.0		
1962						
National Automatic Merchandising						
Association	10/13-10/16	3.0	4.0	2.0	45,000	4,500
American Mining Congress Master Photo Dealers and	9/24 -9/27	7.0	4.0	4.0	80,000	8, 500
Finishers	9/10 -9/13	3.0	4.0	1.0	6, 600	1,400
Western National Restaurant						
Convention and Exposition	8/27 -8/30	5.5	4.0	2.5	40,000	12,400
American Bar Association General Conference - World	8/6 -8/10	1.0	5.0	1.0	006	8,300
Session of Seventh Day Adventists	7/26 -8/4	1.0	9.0	1.0	1,200	27,000
Grocers	6/17 -6/21	4.0	4.0	2.0	28,000	2,900
Southern Baptist Convention	6/4 -6/8	2.0	3.0	1.0	56,800	8,500

Table VI (Continued)

	Date	I	Event	Out	Net Square Feet	Number of Delegates
National Office Management Association	5/20 -5/23	3.5	4.0	1.0	14,000	200
Western Space Age Industries	4/25 -4/29	2.0	5.0	2.0	40,000	27, 100
American Association of Petroleum Geologists	3/25 -3/29	2.0	4.0	1.0	16,200	2,400
Retail Paint and Wallpaper Distributors	9/16 -3/18	1.0	3.0	1.0	11,000	1,500
National Science Teachers Association	3/9 -3/14	1.0	3.5	0.5	16,000	3,000
Western Stationery and Office Equipment		1.5	2.0	1.0	34,700	5,200
Total Year		37.5	58.5	21.0		
1963						
National Council of Teachers of English	11/28-11/30	1.5	2.5	1.0	7,700	4, 600
U.S. Savings and Loan League	11/4 -11/8	2.0	4.0	1.0	8, 5.00	5,000
American College of Surgeons	10/28-11/1	5.0	5.0	1.0	42,500	12,700
WESCON	8/20 -8/23	10.0	4.0	2.5	96,000	32,200
BPOE Grand Lodge	7/14 -7/18	0.5	5.0	0.5	4,300	7,200

Table VI (Continued)

	Date	In	Event	Out	Net Square Feet	Number of Delegates
International Truck, Trailer, and Equipment Show Triple Industrial Supply	6/13 -6/15	2.0	3.0	2.0	34, 100	8, 500
Convention A seociation of Retail Rakers	2/9 - 6/2	0.5	1.0	0.5	31,000	1,800
of America	4/28 -5/1	2.5	2.5	1.5	11,800	;
Total Year		24.0	27.0	10.0		

San Francisco Convention and Visitors Bureau, International Association of Convention Bureaus, and Economics Research Associates. Source:

An additional 75,000 square feet of open air Conventions whose exhibit space needs are met in local hotels are not included. Sixty thousand square foot covered exhibit area. exhibit space was used. 1/2

probably would reveal no statistical correlation. This absence of correlation has been noted by most analysts dealing with convention activity. It results primarily from the fact that the majority of conventions, and even some with very large delegations, require no exhibit space at all. Examining this relationship for only those conventions using exhibit space is more pertinent. Such an analysis yields a more meaningful measure of the relative importance of exhibit space as a component of the City's convention facilities.

Figure 3 is a scatter diagram of the relationship between size of delegation and amount of exhibit space used by San Francisco conventions between 1959 and 1963. The figure indicates that for those conventions requiring exhibit space there is a definite positive correlation between size of delegation and exhibit space utilization. Given the importance of the large convention, as outlined earlier, it is apparent that the existence of adequate exhibit facilities is of economic concern to the City. Cause and effect, of course, is not implied in the correlation displayed in the figure, and the chart does not say that the addition of exhibit space would yield larger delegations. Even given unlimited exibition facilities, the ability to attract more convention business hinges upon many other factors which will be covered in subsequent sections of the study.

Table VII summarizes the characteristics of San Francisco conventions presented in preceding material, and also shows the size distribution of space requirements for conventions using public exhibit space. The table indicates that the percentage of conventions using exhibit space ranges from a high of 16.2 per cent in 1960 to a low of 7.0 per cent in 1963. The table also indicates that no more than three conventions in San Francisco in any given year (based on the 1959-1963 period) had exhibit space requirements exceeding 50,000 net square feet of space. The table further shows that the maximum use of existing public exhibit space occurred in 1960, with 128.5 days. In contrast, 1963 had 61 days of facility use, and 1962 had 117 days.

MAJOR SPORTS AND CONVENTION - EXHIBITION FACILITIES

Before exploring questions of new event potentials, it is necessary to examine the inventory of facilities housing existing events. If,



SOURCE: SAN FRANCISCO CONVENTION AND VISITORS BUREAU AND ECONOMICS RESEARCH ASSOCIATES.

Figure 3

RELATIONSHIP OF NUMBER OF CONVENTION DELEGATES TO AMOUNT OF EXHIBIT SPACE USED, SAN FRANCISCO, 1959-19631/

Table VII

SUMMARY OF CHARACTERISTICS, CONVENTIONS AND TRADE SHOWS IN SAN FRANCISCO REQUIRING EXHIBIT SPACE, $1959-1963\overline{1}/$

1963	114	8 7.0% 27.0 24.0 10.0 61.0	4 2 - 1
1962	107	14 12.2% 58.5 37.5 21.0 117.0	7 2 2 1
1961	116	10 8.6% 33.5 27.5 14.0 75.0	2, 2, 2
1960	66	16.2% 63.5 43.5 21.5 128.5	12 1 2 1
1959	68	12 13.5% 55.5 33.0 18.5 107.0	2 5 - 1
	Total San Francisco conventions $\mathbb{L}/:$ San Francisco conventions using	exhibit space 2/: Number Percentage of conventions Exhibit days Setup days Removal days Total days of facility use Size distribution of convention and trade shows using exhibit	space: Under 25,000 net square feet 25,000-49,999 net square feet 50,000-99,999 net square feet 100,000 and over net square feet

Includes only conventions which rotate their location, and therefore does not include local Does not include conventions which housed exhibits exclusively in hotels. conventions permanently situated in San Francisco.

/2

San Francisco Convention and Visitors Bureau, International Association of Convention Bureaus, and Economics Research Associates Source:

for example, a city's facilities are inadequate either in type, size, or condition, or if existing facilities are completely booked, potentials for new events may exist. If, on the other hand, the city has a balanced inventory of adequate facilities readily available and eager to expand booking schedules, the existing event schedule may prove to be the mainstay of potential for a new facility.

Table VIII shows major auditorium and exhibit facilities in the City of San Francisco. Ten major facilities are listed, with seating capacities ranging from 1,550 for the Geary Theatre to 10,960 in Cow Palace. Obviously, not all these facilities are of equal pertinence to assessing the potentials of a 14,000-seat arena and 300,000-square foot exhibit-convention facility. Introduction of these data, however, does lend perspective to analysis. Moreover, such a spectrum of facilities -- all with open booking periods -- indicates that competition is likely to be intense for "filler" events which might otherwise utilize the proposed new facility. It should also be noted that the Oakland Coliseum-Arena, with 9,100 seats and 70,000 square feet of exhibit space, was not listed, although such a facility is certainly a competitive factor to be reckoned with. Subsequent paragraphs will cover the most significant facilities in detail after a brief review of the calendar of sports and miscellaneous activities by facility.

Table IX is a calendar of the event days of sports and miscellaneous activities by facility for 1963 and 1964. Miscellaneous events shown correspond with the category of shows, special events, and spectaculars listed previously. From the table it is apparent that Cow Palace is the predominant facility hosting these events, followed in importance by the Civic Auditorium-Brooks Hall complex, Winterland, and Kezar Pavilion.

Of the various facilities mentioned, the two largest are selected for further analysis in terms of event schedules, operating policies, and rate structures. These facilities are Cow Palace and Civic Auditorium-Brooks Hall. The new Oakland Coliseum-Arena complex currently under construction is also evaluated in similar fashion. In the latter case, of course, only plans and anticipated programs can be evaluated.

Table VIII

LISTED SEATING AND EXHIBIT AREA CAPACITIES

OF SAN FRANCISCO FACILITIES

Facility	Permanent Seats	Portable Seats	Exhibit Area (square feet)
Civic Auditorium- Brooks Hall	4, 320	4,000	160,000
Cow Palace	10,960	6,800	315, 200
Kezar Pavilion	5,500		
Veterans' Memorial	1,100		
Opera House	3, 250		
Winterland	4,200		
Curran Theatre	1,750		
Geary Theatre	1,550		
Nourse Auditorium	1,850		
Masonic Auditorium	3,200		

Source: Amusement Business, 1964 Arena Auditorium and Stadium Guide; and Economics Research Associates.

Table IX

CALENDAR OF SPORTS AND MISCELLANEOUS EVENTS,

SAN FRANCISCO - 1963-19641/

						1963	Days of	f Use					Total
	January	February	March	April	May	June	July	August	September	October	November	December	Year
Candlestick Park Sports Miscellaneous	::		 	7	15	16 	12	9	12 1	4 	:-		75 1
Civic Auditorium Sports Miscellaneous										-:- -:-	::		
Brooks Hall Sports Miscellaneous	 	==	==	<u> </u>	 9	 1	 	 2	 14	 5	 5	 1	37
Cow Palace Sports Miscellaneous	20 11	11	10 6	2 5	1 1	3	2	2 2	1 4	2 12	7 3	13	74 44
Kezar Pavilion Sports Miscellaneous	 		5	5	5 1	5 3	4	4	1	 	 		29 4
Kezar Stadium Sports Miscellaneous	 	 	::					1	2	1	2	3	9
U.S.F. Gymnasium Sports	1	2	3									8	14
Miscellaneous Masonic Auditorium Sports									 				
Miscellaneous Nourse Auditorium Sports	 	1							1				2
Miscellaneous Winterland Auditorium Sports										1			1
Miscellaneous						7	31	31	6				75
Candlestick Park						1964	Days of	f Use					
Sports Miscellaneous				13	11	11	15	9	16				75
Civic Auditorium Sports Miscellaneous		==	==	 			 		1 10	2	7 	8	18 10
Brooks Hall Sports Miscellaneous	 	==			 9		1		 15	 	 6		31
Cow Palace Sports Miscellaneous	21 2	11 10	16	1	1 5	3	1 1	3 10	2	7 13	9 4	7	82 45
Kezar Palivion Sports Miscellaneous			5	3 1	4 1	4	2		3 	::	2	1	24 2
Kezar Stadium Sports Miscellaneous			 			1	1		2	2		Ξ	6
U.S.F. Gymnasium Sports Miscellaneous	1	2	3						==			3 	9
Masonic Auditorium Sports Miscellaneous	 	 			 1	- - 7	- - 1		<u></u>			 	- - 9
Nourse Auditorium Sports Miscellaneous	:: ::	-:				==		==	-:	::	<u></u>		
Winterland Auditorium Sports Miscellaneous		==	::	==	 	12	31	 31	1	<u> </u>		::	 75

Total sports days: 1963 - 201, 1964 - 214. Total miscellaneous days: 1963 - 89, 1964 - 88.

Source: Economics Research Associates.

^{1/} Public events only. Move in-out not included.

Cow Palace

Opening in 1941, Cow Palace hosted one major event -- the first Grand National Livestock Exposition, Horse Show, and Rodeo -- before being taken over for military use during World War II. After the war and until 1949, Cow Palace operated almost entirely as a livestock exposition facility. In 1949 the California Code under which Cow Palace functions was changed to allow presentation of trade shows and professional sports, broadening the base of potential. At present, non-agricultural activities account for about 90 per cent of use days, although it is painfully evident to both spectators and promoters that the facility was designed basically for agricultural purposes.

The greatest advantages of Cow Palace relate to its size. Seating capacity can expand to 17,000, approximately 260,000 square feet of exhibit space is available, and the parking lot can handle over 3,700 cars. Freeway access is quite good although access by public transportation is poor. For most sporting events, Cow Palace is adequate although not technically ideal by modern standards.

Cow Palace, however, suffers from a number of inadequacies which weaken its competitive position. Some of the technical deficiencies -- poor appearance, inadequate sound and electrical systems, poor seating and sightlines, and inadequate storage space, to name but a few -- could be at least partially alleviated through a major capital improvement program. It should be remembered that Cow Palace has undertaken no serious spending on facilities revamping since opening. Other quite serious inadequacies, however, are virtually impossible to eliminate.

Quite obviously, it is not feasible to relocate the facility, yet its location away from downtown San Francisco is a limitation for attracting certain kinds of business. Although location probably does not seriously dampen attendance potentials for sporting events or major consumer shows, it does limit the effectiveness of Cow Palace in servicing major conventions of trade shows. Thus, the competitive position of the facility in the area of convention business is weak, given an alternative of equal or greater space located downtown.

A second serious problem of Cow Palace is that by policy and major purpose the agricultural or livestock show is the nucleus of

activity around which the facility itself and its program of events orbit. Physical requirements of handling large volumes of livestock impose certain limitations and introduce a type of activity making multi-purpose design most difficult. Although multi-purpose facilities are commonplace in the United States, the greater the diversity of events the facilities must house, the less effective they will be in satisfying demands of any single user. It is difficult to imagine a more diverse spectrum of activities than livestock shows, sports events, conventions, and consumer shows. Cow Palace's competitive position, therefore, would be weak compared to a facility specifically designed with two elements to accommodate two families of events. (Sports and spectator shows, and consumer shows and conventions.) Thus, Cow Palace's schedule of events would be far from secure given development of a downtown arena exhibit complex.

A recent calendar of Cow Palace events is shown in Table X. The table indicates 167 event days not including move in-move out days, which probably represent an additional 20 to 25 days of use. The schedule shown would yield an annual utilization of about 51 to 53 per cent. Since professional basketball has since moved to Civic Auditorium, it is likely that current utilization is closer to 45 per cent including move in-move out days. In practice, it is extremely difficult to achieve a utilization exceeding 70 per cent for arena and exhibit facilities. The Los Angeles Sports Arena, for example, is currently operating at a 67 per cent utilization rate, and is booked almost to capacity.

Because of the extreme importance of non-agricultural events to the revenue attainment of Cow Palace, it is likely the facility will aggressively try to protect its event program against encroachment either from a new downtown facility or from across the Bay. Precisely what avenue of protection will be attempted is, of course, unknown at this time. It is probable that any measures short of major facilities improvement will be only moderately effective.

Cow Palace maintains a flexible schedule of rental rates based for the most part on a percentage of gross revenue against a flat fee minimum. Percentages vary considerably, and concessions are made to prime tenants, but most rates fall within the 5 to 10 per cent range. Flat fee minimums range from \$400 to \$2,250 per day of use.

Table X

1963 EVENT CALENDAR, COW PALACE, SAN FRANCISCO

Event	Event Days
Ice Hockey	47
Basketball	21
Wrestling	14
Roller Derby	9
Track Meets	3
Globetrotters	2
Dog Show	2
Boat Show	10
Limbo Party	1
Hi-Fi Home Show	5
Tennis	1
Boy Scouts	2
Community Musicale, U.S.A.	1
San Francisco State Graduation	1
San Mateo Sheriffs	1
Admiral Dealers	3
Arabian Horse Show	2
Ray Charles	1
WESCON	4
Circus	7
San Francisco Chamber of Commerce	2
Buick Motor Division	1
Tempo Surfing Party	1
Teamsters Meeting	1
Black Watch	2
Ice Hockey Open House	1
Grand National	16
Junior Grand National	6
Total	167

Source: Cow Palace

Civic Auditorium-Brooks Hall Complex

San Francisco Civic Auditorium has undergone two major capital improvement programs since its construction in 1914. The first of these was development of adjoining Brooks Hall approximately seven years ago. The main function envisioned for Brooks Hall was to service exhibit needs of San Francisco's conventions. Developed at a cost of approximately \$3 million, Brooks Hall's listed 90,000 square feet of space connects to the auditorium via an underground link, and is accessible to adjoining Civic Center Plaza Garage as well.

The second major modification to Civic Auditorium was an entire refurbishment of the auditorium proper completed in 1964 at an approximate cost of \$8 million. The renovation did not alter the capabilities of the auditorium either in terms of seating capacity or types of events handled, but rather was directed to improvement of technical deficiencies and aesthetics.

Major advantages of the Civic Auditorium-Brooks Hall complex for the uses under discussion stem for the most part from the relative newness of the facilities resulting from capital improvement programs. Location is good in terms of convenience to hotels and access to freeways as well as amount of convenient parking space. (Civic Center Plaza has approximately 1, 460 stalls available for evening events and 800 stalls available during the day.)

Problems, largely of a technical or design nature, limit the facilities' usefulness, however. The 14-foot ceilings of Brooks Hall are a definite impediment to staging certain types of consumer or trade shows. Moreover, in spite of the impressive listed space of 160,000 square feet in the auditorium-hall complex, deficiencies exist in space utilization potential. These deficiencies revolve around two architectural problems. First, the space is divided between two levels, an undesirable feature from a show producer's viewpoint. Second, column spacing in Brooks Hall and the floor plan of Civic Auditorium impose a substantial reduction in the amount of net square footage available for exhibits. Although actual net square footage is a function of the layout of each individual show, it is believed that the Civic Auditorium-Brooks Hall complex offers no more than 120,000 net square feet of exhibit space for most shows. Other design deficiencies include a shortage of storage, poor location and configuration of meeting rooms, and less than optimum truck access.

Table XI shows the 1964-1965 calendar of events for Civic Auditorium and Brooks Hall. Days of use listed in the table include move in-move out time as well as performance days. It should also be noted that the calendar of events covers periods for which the facilities were booked, and some variation between booking and use might be expected. The calendar shows the facilities to have approximately 200 days of booking per year, indicating a utilization of 55 per cent. As noted earlier, maximum utilization attainable is approximately 70 per cent.

Civic Auditorium maintains a policy of not accepting bookings more than a year in advance, except for conventions and trade shows. This policy has obvious advantages to the City in the encouragement of convention and trade show activity. There are, however, disadvantages to sports and consumer show promoters who also need to plan in advance. It may be possible that such a policy adversely affects the facility's total utilization potential. Whether the policy is desirable is of less consequence than the implications of the policy as they affect analysis of convention activity.

Given the policy of preferential treatment of conventions and trade shows, any deficiency in the City's convention-exhibit facilities must be evaluated in light of the timing of convention activity in the City as well as the total event calendar of the facility. This results from the traditional practice of scheduling conventions two to seven years in advance. Thus, although Civic Auditorium-Brooks Hall may appear to be relatively well booked, ample opportunity may exist to accommodate additional convention activity. If, on the other hand, the schedule of convention activity in the City is tight or if conventions using exhibit space overlap one another, a need for additional facilities to house such conventions or trade shows becomes evident.

Figure 4 is a calendar of all conventions and trade shows in San Francisco requiring exhibit space in public facilities for the five-year period 1959 through 1963. From the figure, it is apparent that overlapping of conventions using exhibit space is comparatively rare, occurring four times in five years. In addition to such overlapping activities, the relative tightness in the schedule may be judged by the number of conventions scheduled with less than a five-day interval between the end of one and the beginning of the next. As noted in the

Table XI

1964-1965 EVENT CALENDAR CIVIC AUDITORIUM AND BROOKS HALL, SAN FRANCISCO

	Total 1	Days <u>1</u> /
Show	Civic	Brooks
Dow Charry		1
Dog Show	 8	1
Republican Convention	0	
Art & Gift Show		9
California Federation of Labor	5	
Wilding, Inc.		4
Ballet	4	
U.S. World Trade Fair	24	24
Basketball	1	∠ ±
Concert	1	
	1	66
Antiques Show		00
Concert	1	
Concert	1	
National Association Retail Druggists		9
National Association Retail Druggists	4	
Irish Brigade	3	
Fol-de-Rol	2	
Police Ball	1	
School Business Officials		8
School Business Officials	4	
Basketball	2	
Computer Conference		8
Computer Conference	4	
Basketball	1	

Table XI (Continued)

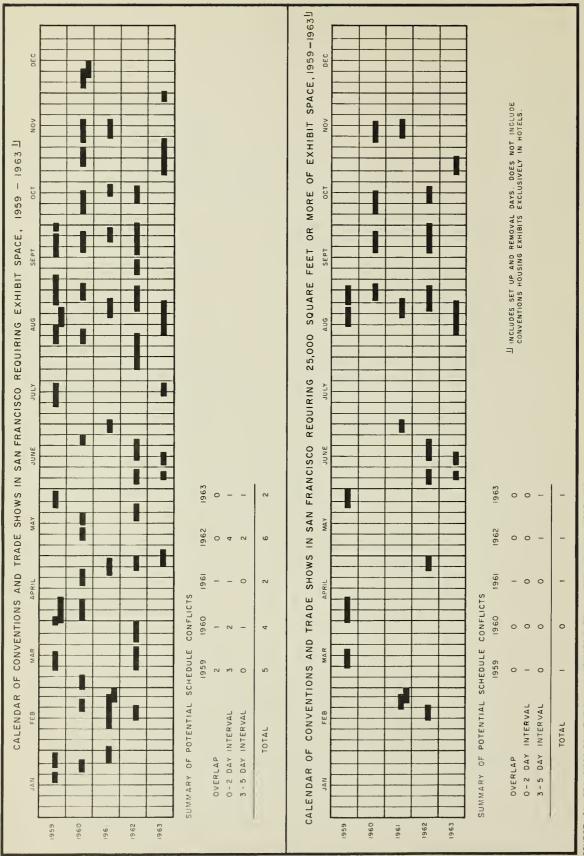
	Total Da	ys <u>l</u> /
Show	Civic	Brooks
Basketball	1	
American Dental Association		11
American Dental Association	5	
Ice Capades	15	
Imported Car Show		9
Atomic Industrial Forum		16
Basketball	2	
Boxing	1	
Basketball	2	
Boxing	1	
San Francisco Symphony	2	
Basketball	1	
U.S. Post Office Party	1	
Dog Show	3	3
Basketball	3	
National Canners	11	11
Basketball	2	
Basketball	1	
Art and Gift Show	9	9
Basketball	2	
Basketball	3	
Hardware Show		5
Basketball	3	
Travel & Vacation Show		13
Basketball	3	
Basketball	3	
Furniture Fashions Exposition	14	14

Table XI (Continued)

	Total	Days <u>1</u> /
Show	Civic	Brooks
Basketball	2	
College of Obstetrics and Gynecology	6	6
Basketball	3	
American Academy of General Practice		9
American Academy of General Practice	5	
I. B. M.	10	10
National League of Nursing	9	9
Truck Trailer Show		7
American Baptist Convention	8	8
Pacific Coast Builders Conference	6	
Total	195	201

Source: San Francisco Civic Auditorium.

^{1/} Includes move in-out.



SOURCE: SAN FRANCISCO CONVENTION AND VISITORS BUREAU, INTERNATIONAL ASSOCIATION OF CONVENTION BUREAUS, AND ECONOMICS RESEARCH ASSOCIATES.

Figure 4

figure, the maximum number of times this situation prevailed during the period was in 1962, with six occurrences. The average number of times over the past five years was about four per year. The figure also shows, as a separate element, the calendar of those conventions and trade shows using 25,000 net square feet of exhibit space or more. As would be expected, cases of overlap or schedule tightness are less frequent in this category. Aside from the comparatively small number of exhibit-oriented conventions and shows existing in the country, such factors as hotel availability also act to limit overlap of conventions with very large space needs.

It may be concluded from the figure that perhaps no more than two or three trade shows or conventions per year could be expected to utilize a new facility due solely to scheduling problems with existing facilities. This, of course, does not include large new conventions attracted to the City as a result of the existence of an expanded convention plant. It does, however, represent a reasonable assessment of the potential business that might be achieved because of schedule conflicts. Given the dispersion of convention activity throughout the year, it is unreasonable to assume greater than indicated schedule conflicts.

The rate structure of Civic Auditorium-Brooks Hall as currently published is presented in the text table below. Although percentage of gross arrangements are reported to prevail as well, they are not included in the published schedule.

Rental Rate Schedule,	Civic	Auditori	um-Brooks Hall
	R	ate	Move In-Move Out
Facility	Per	r Day	Per Day
			
Main arena			
Exhibits	\$	900	\$300
Meetings		500	
Main floor corridors		200	
Polk and Larkin Halls			
Exhibits		200	œ -
Meetings		100	
Second floor corridors		100	- -
Third or fourth floor			
meeting rooms (either			
side)		100	
Brooks Hall			
Full hall	1	,000	500
Half hall		500	250

Oakland Coliseum-Arena

Emphasis of the Oakland Coliseum-Arena is upon sports events, with convention and consumer show activity assuming secondary importance. The facility, currently under construction near the Oakland Airport, is oriented around a multi-purpose stadium designed for both baseball and football use, and an adjoining arena-exhibit hall. The stadium will accommodate 48, 400 fans, and the arena with its 9, 100 permanent seats will accommodate crowds up to 13, 800 for certain types of events. A total of 70,000 square feet of exhibit space is programmed beneath the stadium, and a certain amount of exhibit space will accrue from use of the arena floor as well.

An examination of the proposed schedule of events for the Oakland Coliseum-Arena gives some measure of the degree to which it will be a competitive factor with a new facility in San Francisco. Table XII shows the anticipated program for the Oakland facility, and upon examination reveals several problems in the projected pattern of use. First, of course, is the fact that Oakland has neither professional hockey or professional basketball teams, and yet ten days of professional basketball and 35 days of professional hockey are scheduled. It must be assumed at this point that the San Francisco professional basketball team will play part of its schedule in Oakland. In the case of professional ice hockey, Oakland must either induce the San Francisco Seals to relocate or persuade the Western Hockey League to relax its 50-mile territorial exclusive. In any case, it is obvious that Oakland intends to compete either for events, teams, or audiences with San Francisco. Because of the dependence of the Oakland facility upon sports and consumer show events for revenue, competition is likely to be quite aggressive.

The rate structure of the Oakland facility is based upon 10 per cent of gross admissions for commercial sports and a flat four-walls rental fee for other activities. Proposed four-walls rates are \$500 per day for exhibits and shows and \$400 per day for miscellaneous and community service events.

Table XII

PROPOSED CALENDAR OF EVENTS, OAKLAND COLISEUM-ARENA

	Eve	ent Days
		Set-Up
	Public	Tear-Down
Arena Use	Days	Days
Sports Events		
Ice Hockey		
Professional	35	
Amateur	6	
Public Skating	50	
Basketball		
Professional	10	
College	15	
High School	4	
Exhibition (Globetrotters)	2	
Boxing	4	ou =-
Wrestling	4	
Roller Derby	6	
Indoor Track	2	2
Professional Tennis	2	
Horse and Equestrian Shows	2	2
Spectaculars		
Ice Shows	12	2
Circuses	10	2
Rodeos	2	2
Scout-O-Ramas, etc.	2	2
Pageants, Beauty Contests, etc.	4	
Variety Shows and Benefits	10	
Exhibit-Type Shows		
Consumer Shows	20	4
Trade Shows	8	4
Others		
Dog and Cat Shows	3	2
Fashion Shows	1	1
Miscellaneous	4	2

Table XII (Continued)

	Eve	nt Days
		Set-Up
	Public	Tear-Down
Arena Use	Days	Days
Community Service Events		
Religious Convocations	5	
Political Meetings	2	
School Assemblies and Graduation		
Exercises	4	
Other Ceremonials	3	es co
Banquets	3	ass com
Dance (square and regular)	6	
Business Dealer Meetings	2	- -
Conventions	10	<u></u>
Total	253	25

Source: Real Estate Research Corporation.

NEW EVENTS POTENTIAL

Given preceding material, it is now possible to assess what opportunities are available for developing new events as a result of constructing the proposed facility. A new facility in San Francisco must derive its new events from two sources. First, it can satisfy unrequited demands of the existing market area, assuming these demands have been unsatisfied because of a lack of facilities. For example, when Candlestick Park opened, a new event, major league baseball, successfully entered the area. Second, the facility can open broader market horizons for the community by allowing it to compete in nationwide markets from which its existing facilities now exclude it.

Previous data concerning existing event schedules and facilities indicates there is probably little new event potential to be realized from the local market. San Francisco's schedule of events leaves few if any gaps in the types of consumer activities which might be introduced to the area. Moreover, existing facilities have sufficient openings in their booking schedules to accommodate any new event types. In sports, every major spectator activity is presently offered in San Francisco. Perhaps the only emerging sport which has yet to achieve major event status is professional indoor tennis, which might offer a day or two of activity. Similar saturation is apparent in the area of consumer shows (which, incidentally, are not on a rising trend nationally), spectaculars, and related activities. Thus, it appears that new event potential must stem from expanding the sphere of market influence. This, in turn, means competing more effectively throughout California, the West, and the nation for conventions and trade shows with very large exhibit area requirements.

Table XIII shows the size distribution of conventions scheduled for California in 1965. In addition to providing perspective on the relative scarcity of large conventions, the table also reveals that of those conventions with 2,000 or more delegates, San Francisco hosts almost twice the number Los Angeles hosts. This pre-eminent position is probably due to factors introduced earlier in this section. It should be pointed out, however, that in spite of what may seem to be the obvious advantages of San Francisco as a convention city, competition from other California cities may be expected to intensify in future years. As San Diego and Los Angeles increase their convention capabilities,

Table XIII

SIZE DISTRIBUTION OF CONVENTIONS SCHEDULED FOR CALIFORNIA, 1965

Number of Delegates	Number of Conventions	Percentage of Conventions
Less than 500	208	50%
500-999	99	22
1,000-1,999	60	14
2,000-2,9991/	18	4
3,000 or more <u>1</u> /	43	10
Total	417	100%

Source: World Convention Dates, Hendrickson Publishing Co., July 1964.

^{1/} Of those conventions with 2,000 or more attending: San Francisco will host 39 per cent Los Angeles will host 20 per cent

San Francisco's large margin of convention leadership will be subject to increasing challenge. Competition for smaller conventions will come from such cities as Anaheim and Bakersfield, each with new facilities. Competition for larger conventions will come not only from major California cities but from other Western communities with convention plants such as Portland, Seattle, and Las Vegas. In short, although San Francisco's position is enviable at present, it is far from secure.

Table XIV presents data for national and regional conventions in the United States and Canada as well as the size distribution of existing conventions. As noted earlier, there is probably little correlation between convention delegation size and exhibit space needs. Therefore, in terms of estimating how much new convention business might be attracted to San Francisco given an expansion of exhibit space inventory, space using conventions and trade shows must be segregated from total conventions.

Table XV provides this separation and notes the space requirements of conventions, exhibits, and trade shows in the United States. Although covering the most important and largest of these activities, the table is based on conventions which list their meetings and space needs in trade publications. It is probable, therefore, that the number of small space users is somewhat understated. This, however, is of no consequence to subsequent analysis.

As noted earlier, the Civic Auditorium-Brooks Hall complex can easily service the needs of all except the very largest conventions and trade shows. Attention is drawn, therefore, to the number of shows in the United States having very large space requirements. Table XV indicates there are 141 events in the country whose space requirements range from 75,000 to over 200,000 net square feet. Most of these shows, however, do not rotate their location between major cities, and even of those that do, a large number do not consider the West Coast because of travel expense, residence of delegates, concentration of industry, etc. As indicated in the table, under the most optimistic assumptions no more than four to eight of these very large shows might visit the West Coast in any one year. Giving full weight to the competitive advantages of the City, it is unlikely that more than one or two of these major events could be attracted to San Francisco.

Table XIV

SIZE DISTRIBUTION OF NATIONAL AND REGIONAL CONVENTIONS, UNITED STATES AND CANADA, 1964

Number of Delegates	Number of Conventions	Percentage of Conventions
Under 500	3,410	61%
500-999	1,260	22
1,000-1,999	560	10
2,000-2,999	120	3
3,000 or more	220	4
Total	5,570	100%

Source: International Association of Convention Bureaus.

Table XV

SIZE DISTRIBUTION OF EXHIBITS AND TRADE SHOWS IN THE UNITED STATES



Space Needs (net square feet)	Number	Percentage
0-24,999	2,600	80%
25,000-49,999	357	11
50,000-74,999	133	4
75,000-99,999	34	1
100,000-149,999	48	2 41 <u>1</u> /
150,000-199,999	39	1
200,000 and more		1
Total	3,231	

Source: Sales Meetings Magazine, 1964 Exhibits Schedule; Hendrickson Publishing Co., World Convention Dates.

^{1/} Of the 141 large exhibit-trade show events in the United States an estimated 20 to 40 per cent are on a programmed rotation. Thus 40 to 60 shows change location each year. Generally, national shows visit West Coast locations every five to seven years. Thus total West Coast potentials range from four to eight rotating national shows per year.

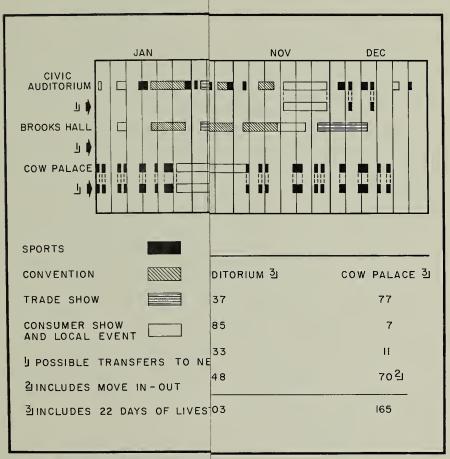
SCHEDULE OF EVENTS, INCOME, AND EXPENSES, SAN FRANCISCO ARENA AND EXHIBIT-CONVENTION FACILITY

With the preceding material as background, it is possible to project a reasonable schedule of events for the proposed facility in a typical year of operation. Once the event schedule is established, projections of income and expense can be derived using prevailing rate patterns and the operating expense experience of similar facilities.

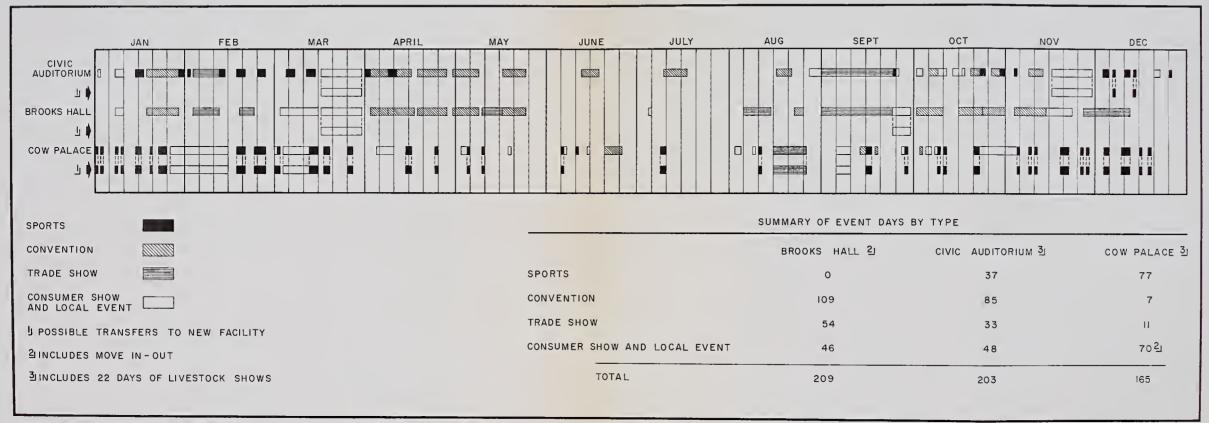
Schedule of Events

The schedule of events for the proposed facility will depend in large measure upon the transfer of events from Cow Palace, given its vulnerability to competition already noted. To some extent, certain events at Civic Auditorium-Brooks Hall are also transferable, but only if the event is inappropriately housed in that facility. Figure 5 shows the calendar of events of these two facilities and indicates the portion of the event schedule of each that would probably accrue to the proposed new facility. It is assumed that basketball will continue to be played in Civic Auditorium for the most part, since the auditorium can accommodate a crowd of at least double the size of the current team's average attendance. The four or five games per year that might tax Civic Auditorium's capacities, however, have been transferred to the new facility.

Adding new event potentials to this basic nucleus yields a schedule of events summarized in Table XVI. The table shows days of use and move in-move out days for the proposed facility in a typical operating year. A total of 146 event days of use for the combined facilities is indicated plus an additional 30 days of move in-move out time, yielding a total of 176 days of activity. Event days for the arena total 103, with an additional three days of move in-move out time. The exhibit and convention complex accounts for the remaining 43 days of use and 27 days of move in-move out time.



SOURCE: ECONOMICS RESEARCH ASSOCIAT



SOURCE: ECONOMICS RESEARCH ASSOCIATES.

Figure 5

PATTERNS OF FACILITY USAGE
AND THE TRANSFER OF SELECTED EVENTS
TO A NEW FACILITY



Table XVI

SCHEDULE OF EVENTS FOR A TYPICAL OPERATING YEAR SAN FRANCISCO SPORTS ARENA AND CONVENTION CENTER

Sports Arena	Days of Use <u>l</u> /	Move In- Move Out Days
Ice Hockey	35	
Basketball:	33	
Professional	10	
Exhibition	2	
	2	
College	2	
Boxing		
Wrestling	15	
Roller Derby	7	
Indoor Track	2	
Professional Tennis	1	
Circus	5	
Ice Show	10	2
Water Show	2	1
Variety and Headliners	5	
Conventions and Meetings	_5	==
Total Arena	103	3
Convention Exhibit Hall		
Convention - trade show (full hall)	10	10
Convention - trade show (one-half hall)	4	2
Convention - trade show (one-fourth hall)	4	2
Boat Show (full hall)	10	5
World Trade Fair (full hall)	10	5
Other consumer shows (one-half hall)	5	_3
Total Exhibit Hall	43	27
Total Both Facilities	146	30

^{1/} Does not include move-in move-out days.

Source: Economics Research Associates.

Operating Income

In addition to the basic schedule of events noted earlier, estimation of income depends upon such other factors as average attendance per event, admissions scaling, and per capita concession spending. These data yield the gross income the facility produces. Competitive factors set rental rates and percentage of concession income that realistically can be expected to accrue to the facility. In setting rentals and concession fees, the rate patterns of various major facilities in the Western United States were reviewed. The final decisions, however, were based more on present and likely future rental rates that would prevail in the San Francisco Bay Area. This was believed more realistic in view of continued operation of the three major facilities with which the new arena and convention-exhibition complex will compete. In addition, where data were available, prices paid by promoters for use of various facilities also were taken into account. This latter factor was of particular consequence in evaluating consumer and trade show rents, which are shown in Table XVII for selected activities in both Los Angeles and San Francisco. The fact that certain show promoters also incurred additional expense because of the inadequacy of some facilities was taken into account in setting rental patterns. Given these various considerations, the rental schedule believed most realistic for the new arena and exhibit-convention complex is shown in the text table below:

Proposed Rental Rat	es, San Francisco Sports Arena
and Convent	tion-Exhibition Facility
Sports Arena	10 per cent of gross income after admission taxes or \$1,200 per day of use, whichever is greater.
Convention-Exhibition Facility	For conventions and trade shows, 1.5 cents per square foot per day.
	For consumer shows, 1.0 cents per square foot per day.

The concession income rate has been set at 25 per cent of gross concession revenue. Although some facilities manage to achieve 5 to 7 per cent more than 25 per cent of revenue, this often leads to lowering of concession quality or a reduction in the amount of food or

Table XVII

TRADE AND CONSUMER SHOW RENTS, LOS ANGELES SPORTS ARENA

	1964	1963	1962	1961	1960
Strong Cat Show	4 7 700	1	¢ 2 800	¢10	
Cascom Car Dilow	00F (- +	1	4 6,000	410,000	!
Home Furnishings	15,000	i	i	;	!
Home Show	25,600	\$27,000	\$22,200	22,200	\$37,600
WESCON	;	19,000	1	16,000	:
Furniture Fashions	-	30,000	;	1 3	;
Car and Boat Show	!	5,000	;	;	;
I.S.A. Show	!	!	19,000	;	;
Restaurant Show	-	;	16,500	;	;
Sports, Vacation, and Travel Show	;	!	16,900	8,500	11,000
Great Western Housewares	;	1	9,000	!	1
Western Tool Show	1	1	!	19,500	;
Pacific Automotive Show	;	1	;	14,500	;
Office Equipment Show	;	1	!	16,000	;
Do-It-Yourself Show	i i	1	;	;	22,000
Air and Space Show	1	-	!	;	2,600
Buick Show	-	1	-	1	6,500

SELECTED TRADE AND CONSUMER SHOW RENTS, SAN FRANCISCO

Source: Records of facilities housing events and Economics Research Associates.

beverage offered patrons. This in turn has an adverse effect upon per capita spending, and consequently the increase in income to the facility is inconsequential. Moreover, concessioning is perhaps the most sensitive element of facility operation to public opinion. If poor concessioning practices result from an attempt to squeeze the concessionaire with a high rent, the entire image of the facility suffers.

Table XVIII shows the results of applying the indicated rental schedule to the event program outlined earlier. Attendance per event reflects probable event support in the Bay Area. Ticket prices and per capita concession spending are based on experience factors realistic for planning purposes. Generally speaking, these factors have not increased significantly over time. The table indicates total income to the arena and convention-exhibit facility of \$424,490 in a typical year of operation. Of this amount, concessions account for 27 per cent, and the remaining 73 per cent accrues from facility rental. Income from event parking is covered in the analysis of garage operations in Section VI of the report.

Operating Expenses

In the absence of either an existing operating organization or detailed physical plans for structures and equipment, the most reasonable method of evaluating likely operating expenses is a comprehensive analysis of expense patterns and operating practices of a comparable facility. In terms of size, location, and type, the facility judged most comparable is the Los Angeles Memorial Sports Arena. It is worthy of note that this facility is the most successful sports arena in the United States from an operating and financial viewpoint.

In addition to evaluating the operating structure of the Los Angeles facility, audited financial statements were analyzed for the years 1959 through 1964. The most recent year of operation was selected for detailed analysis. Accounting data were adjusted to eliminate ground rent from the operating statement and to include depreciation of equipment, which by accounting convention had been carried in the funds statement. Reimbursable expenses (i.e., those incurred by the facility and billed directly to tenants) were also eliminated from operating expenses, and

Table XVIII

SCHEDULE OF EVENTS AND INCOME, TYPICAL OPERATING YEAR SAN FRANCISCO SPORTS ARENA AND CONVENTION CENTER

	Facility	Use	In-Out	Attendance Average To	ance Total	Average	Event	Per Capita Concession	Gross	Rental	Concession
	Usually Used	Days	Days	Per Event	for Year	Ticket	Income	Spending	Income	Revenue	Revenue
Sports Arena Ice Hockey Bas	Cow Palace	35	;	5, 500	192,500	\$2.50	\$481,250	40¢	\$77,000	\$ 48,130	\$ 19,250
Professional	Civic Auditorium	10	;	4,500	45,000	2.25	101,250	40	18,000	12,000	4,500
Exhibition	Cow Palace	2	1	2,000	10,000	2.50	25,000	40	4,000	2,500	1,000
College	Various	2	!	4,000	8,000	1.75	14,000	40	3, 200	2,400	800
Boxing	Civic Auditorium	2	:	3,500	7,000	2.50	17,500	09	4,200	2,400	1,050
Wrestling	Cow Palace	15	;	6,000	90,000	2.50	225,000	09	54,000	22,500	13,500
Roller Derby	Cow Palace	7	;	2,000	35,000	2.00	70,000	20	17,500	7,000	4,380
Indoor Track	Cow Palace	2	;	2,000	10,000	2.00	20,000	40	4,000	2,400	1,000
Professional Tennis	New event	-	1	4,000	4,000	2.25	9,000	40	1,600	1,200	400
Circus	Cow Palace	2	!	2,000	25,000	2.50	62,500	20	17,500	6,250	4,380
Ice Show	Civic Auditorium	10	2	2,000	50,000	2.75	137,500	30	15,000	14,750	3,750
Water Show	New event	2	1	4,000	8,000	2.25	18,000	30	2, 400	2,900	009
Variety and Headliners	Various	2	;	2,000	25,000	2.50	62,500	10	2,500	6,250	009
Conventions and meetings	Various	2	:1	;	:	:	:	!	2,500	6,000	009
Subtotal		103	m							\$136,680	\$ 55,810
Convention-Exhibit Hall											
room use days)		;	;	;	;	+	:	:	:	\$ 16,000	;
Convention-trade show		-	-								0
(iuii naii) = 2 events		2	10	:	:		!	:	:	000,60	\$ 10,000
(one-half hall)		4	2	;	;	;	;	;	;	12,500	2,000
Convention-trade show											
(one-fourth hall)		4	2	;	:	;	;	:	:	6,500	1,000
Boat show (full hall)	Cow Palace	10	5	-	-	;	1	:	1	32,500	20,000
World Trade Fair (full hall)	Civic Auditorium	10	2	;	:	;	!	:	;	32,500	20,000
Other consumer show	i										
(one-half hall)	Civic Auditorium	5	m	1	1	:	:	!	1	9,000	5,000
Subtotal		43	27	:	1	:	:	;	:	\$174,000	\$ 58,000
Arena-Exhibit Hall combined		146	30		:	;	1	;	;	\$310,680	\$113,810
								Tot	Total Revenue	\$42	\$424, 490

Source: Economics Research Associates.

remaining expenses were divided into fixed and variable categories. Results of these several calculations are shown in Appendix Table C-IV which indicates fixed expenses to approximate \$152,000 per year, and variable expenses to be \$750 per event.

In evaluating cost patterns of the Los Angeles Memorial Sports Arena, two other pertinent factors must be considered in context with the costs noted above. First, costs of operating a separate exhibit hall complex are not included. A consulting firm retained by the Sports Arena has estimated that if a separate exhibit-hall facility were coupled to the Sports Arena, fixed costs would be increased by \$100,000 per year excluding debt service or depreciation. Second, the Sports Arena and the Los Angeles Memorial Coliseum are jointly operated by the same management, although costs are allocated to each facility. If, however, the Sports Arena were operating as an entirely separate facility, there is little question that costs would be increased above those noted because some sharing of expenses takes place which is not covered by the allocation procedure.

From these and other data a budget was evolved for the proposed San Francisco facility. Personnel needs were estimated, and wage rates were set on the basis of the most current Labor Market Survey by the U.S. Department of Labor. Adjustments were made for prevailing patterns of increase in the cost of living, and cost estimates were expressed in terms of a 1970 expense base -- since that is assumed to be the first full year of operation 1. Other fixed and variable expenses were estimated and adjusted to reflect anticipated 1970 costs. Table XIX, showing the results of these calculations, indicates fixed expenses of \$384,900 per year and variable expenses of \$828 per event day. Given the event schedule indicated in preceding material, total costs are estimated to be \$505,800 per year.

Operating Loss

Quite obviously, the calculations of income and expense presented above yield an operating loss for a typical year slightly in excess

Construction costs are based on beginning construction activity in 1967.
From an operating expense viewpoint, however, 1970 is assumed to be the first representative year of operation.

Table XIX

ESTIMATED ANNUAL OPERATING COSTS, TYPICAL YEAR OF OPERATION, SAN FRANCISCO SPORTS ARENA AND CONVENTION CENTER!

Personnel

Manager	1.0	\$ 16,500
Assistant manager	1.0	11,000
Box office treasurer	1.0	8,800
Bookkeeper	1.0	6,600
Secretary	1.0	6,600
Secretary-receptionist	1.0	5,400
Foreman	1.0	7,800
Laborers	2.0	12,100
Operating engineer	1.5	15,000
Chief electrician	1.5	15,000
Guards	5.0	27,600
Janitors	2.0	8,800
Total personnel	19.0	\$141,200
Payroll taxes and benefits	s at 25 per cent	
of payroll		35,300
		\$176,500
Other Fixed Expenses		
Contract services		\$ 44,200
Equipment depreciation		50,000
Repairs and maintenance		38,600
Utilities		22,000

Table XIX (Continued)

Other Fixed Expenses (Continued)

Insurance	\$ 25,000
Materials and supplies	16,600
Miscellaneous	5,000
Advertising and publicity	5,000
Audit and legal	2,000
Total fixed expenses	\$384,900
Variable expense (146-day use program)	
at \$828 per event day	120,900
Total expense	\$505,800

Source: Economics Research Associates.

^{1/ 1970} constant cost base.

of \$81,000. Figure 6 depicts operating data in the form of a simple break-even chart based on average income per event day. Such an analysis, although an oversimplification, indicates that break-even volume would be achieved at about 184 days of use. This, of course, presumes that each day added to the schedule would have an average revenue potential equal to the typical event scheduled for the facility.

It is appropriate to point out at this juncture that losses are more common than operating profits for facilities of this nature. Table XX, showing the financial performance of 71 auditoriums, arenas, or related facilities throughout the country, indicates that slightly more than 66 per cent of these operate at an annual loss. Moreover, it is known that some of the facilities shown to operate at a profit include either subsidies in their income or fail to show as operating expenses certain expense elements donated by either city or county. Thus, the number of facilities which operate at a profit is probably even less than indicated in the table. It should also be noted that debt service is not included in the operating expenses shown.

In terms of evaluating the importance of operating loss as a decision element in appraising the value of such a facility to the community, the following statement from Auditoriums and Arenas is offered!/:

"One of the most inaccurate methods of determining the value of an auditorium or arena to a community and of judging the efficiency with which it is managed, is a cursory look at the income and expenditure columns of the financial report.

"Some of the nation's best managed auditoriums and those most highly praised by professionals each year report heavy losses, ranging to five and six figures. Others known to be less valuable to the community and perhaps not as well managed finish the year in the black.

^{1/} Auditoriums and Arenas, a survey by the International Association of Auditorium Managers, 1961.

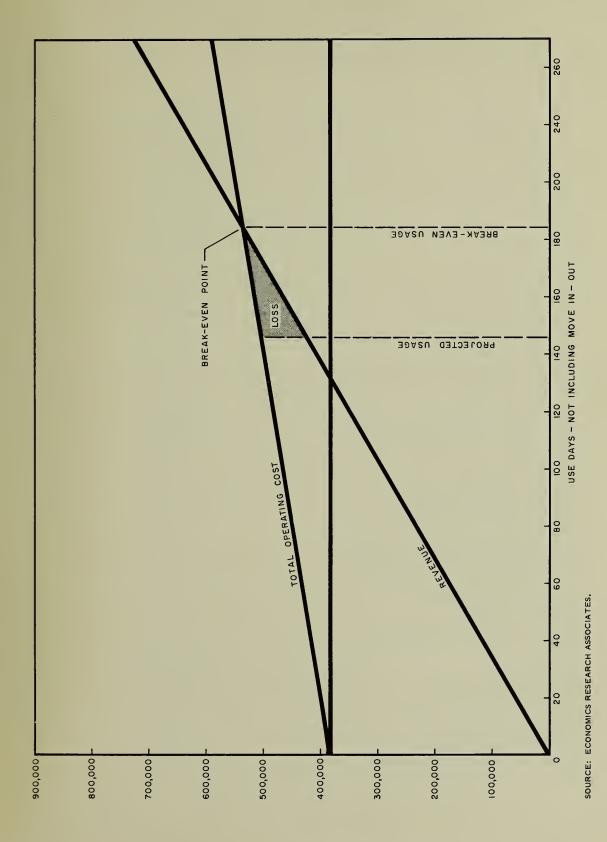


Figure 6

PROJECTED BREAK-EVEN USAGE, SAN FRANCISCO SPORTS ARENA-CONVENTION CENTER

Table XX

OPERATING PROFITS OR LOSS OF SELECTED ARENAS AND AUDITORIUMS, 1961-1962

<u>City</u>	Amount of Profit or (Loss)
Honolulu	\$ 20,675
Los Angeles (Memorial	Ţ,
Sports Arena)	453,000
Portland, Oregon	221, 303
Milwaukee	146, 432
Waco, Texas	30,013
Columbus, Ohio	59,765
Corpus Christi, Texas	13,000
Memphis, Tennessee	22,654
Houston, Texas	36, 592
Tulare	9, 913
Denver, Colorado (Auditorium)	47,174
Austin, Texas	7,500
Rochester, Minnesota	8,356
Bismarck, North Dakota	2,835
Vancouver, Washington	1,864
Victoria, Canada	5, 188
San Francisco (Civic)	9,491
Jackson, Mississippi	19,480
Greensboro, North Carolina	21,000
Dallas, Texas	7,270
Spartanburg, South Carolina	1,372
Charleston, West Virginia	4, 104
Lincoln, Nebraska	271
Tampa, Florida	
Greenville, South Carolina	(71)
Long Beach	(1, 273)
San Angelo, Texas	(250)
Des Moines, Iowa	(3, 479)
Beckley, West Virginia	(503)
Lubbock, Texas	(1,591)
Pensacola, Florida	(1, 219)
Sioux Falls, South Dakota	(2,000)

Table XX (Continued)

	Amount of
City	Profit or (Loss)
Minute alia /Maniainal)	Φ. / . T O.4.O.\
Minneapolis (Municipal)	\$ (5, 949)
Fort Lauderdale, Florida	(4,000)
Lansing, Michigan	(8, 153)
Wichita, Kansas	(3,858)
Pittsburgh, Pennsylvania	(37, 787)
Birmingham, Alabama	(5,000)
Albuquerque, New Mexico	(4, 150)
Knoxville, Tennessee	(15, 367)
Lafayette, Louisiana	(5,344)
Grand Rapids, Michigan	(15, 356)
Oklahoma City, Oklahoma	(11,000)
Oakland	(15, 427)
Fresno	(5,150)
Orlando, Florida	(1,500)
Sacramento	(5,791)
Montgomery, Alabama	(6, 753)
Santa Monica	(19, 539)
Columbus, Georgia	(9,000)
San Jose	(11, 990)
Utica, New York	(25, 000)
Sturgis, Michigan	(12,000)
Philadelphia	(109, 000)
Pasadena	(24, 981)
Vancouver, Canada	(54, 510)
Quebec, Canada	(65, 607)
Raleigh, North Carolina	(8,000)
Norfolk, Virginia	(26, 927)
Syracuse, New York	(87,737)
Minot, North Dakota	(16, 370)
Port Huron, Michigan	(15,000)
Worcester, Massachusetts	(30,003)
Asheville, North Carolina	(15,000)

Table XX (Continued)

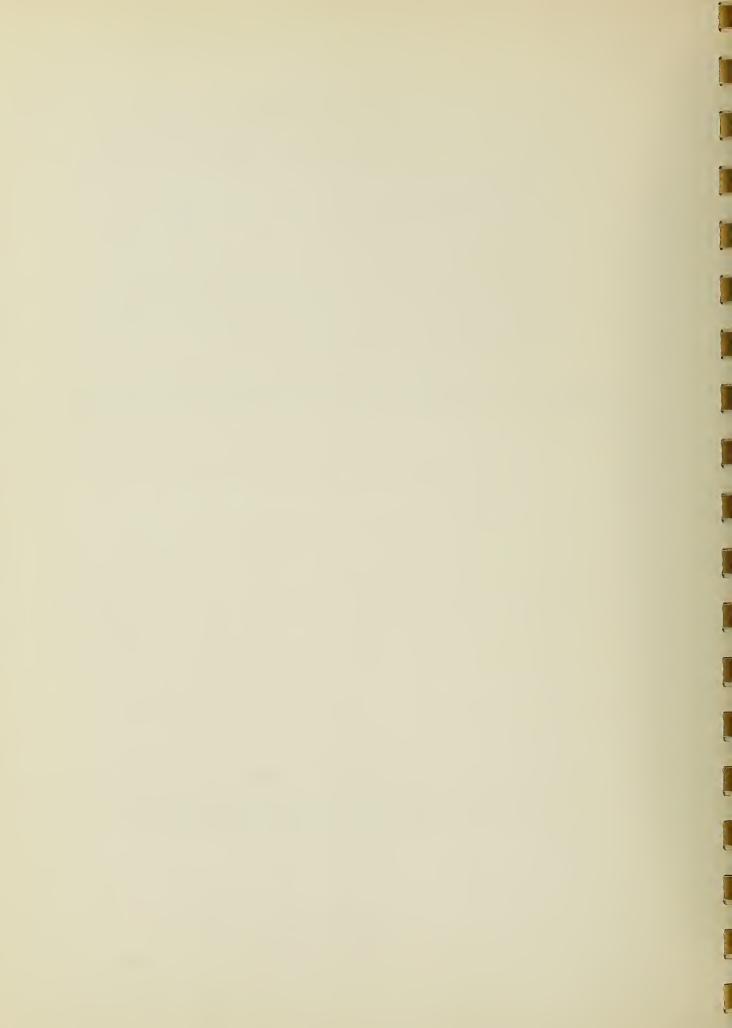
City	Amount of Profit or (Loss)
Atlanta, Georgia	\$(70,000)
Topeka, Kansas	(25,000)
Fargo, North Dakota	(35,000)
Green Bay, Wisconsin	(70, 781)
Miami, Florida (Municipal)	(50, 492)
Stockton	(32, 451)
St. Paul, Minneapolis (Arena)	(48,000)

Source: Auditoriums and Arenas, a survey by the International Association of Auditorium Managers.

".... The operations of some municipal auditoriums and arenas are closely interwoven with other city operations. Often various branches of city government give direct or indirect financial assistance to the auditorium which may not show up on the balance sheet. On the other hand, the auditorium management may contribute to other city agencies such as giving office space in the auditorium free or at lower-than-economic rents.

!'Nor can credit be given in financial reports for the secondary benefits that an auditorium brings a community -- the increased property values in the neighborhood in which it is located, and the business it generates for the merchants of the city.''

Tables in Appendix C present supplementary information covering various facets of public facilities operation throughout the United States.



Section IV

PROJECTED USE AND ECONOMIC PERFORMANCE OF 2,200-SEAT AND 1,800-SEAT THEATERS

In contrast to the rather complex analysis of use of the arena and convention-exhibit facilities in the preceding section, theater use is more simply although less precisely evaluated. This is true for several reasons. First, theaters are highly specialized structures whose design is pointed toward presentation of dramatic or musical events rather than multi-purpose use. Second, the size and scope of the proposed theaters limit further the type of presentation that can be effectively staged. For example, neither facility would be ideal for performance of small instrumental or chamber music groups or dramatic readings, and both theaters would be totally unsuitable for little theater presentations requiring a more intimate facility. Third, as noted earlier, San Francisco is amply endowed with a variety of auditorium facilities. Thus, interim use of either theater for meetings, conventions, or community use would be of little or no economic consequence and need not be considered.

Contributing to difficulties of precise prediction of use patterns for the two new theaters is the unstable nature of legitimate or proscenium theater in the United States as a whole. San Francisco cannot be considered a cultural island, since in common with other Western cities it relies upon outside producers for the bulk of its presentations. For theatrical productions, the City relies almost exclusively upon New York. For musical comedy, the Civic Light Opera Association with headquarters in Los Angeles provides the bill of fare, and Civic Light Opera in turn is also heavily -- although not entirely -- dependent upon Broadway. Thus two national trends affecting show production are of consequence to evaluating use potentials of the theaters in question.

The first of these is the flight of venture capital from new proscenium theater construction, and the gradual elimination of performance facilities throughout the United States. Once a flourishing business attracting substantial venture capital for facilities, proscenium theater

lost its mass market first to the motion picture industry and subsequently to television. High risks, uncertain yields, and rising land values have discouraged new theater construction and contributed to the gradual elimination of performing facilities not only in New York, but also in other cities. The recent razing of San Francisco's Alcazar Theater bears evidence that the trend is indeed nationwide. In the long term a decline in available facilities in major theatrical centers would mean a decline in the number of performances available to go on the road. With accelerating interest in developing public facilities, however, such a pessimistic outlook is not wholly justified.

This interest manifests itself in the intense dedication of private citizens throughout the country who are spearheading drives to provide public facilities as substitutes for the declining number of theaters. Such facilities as Lincoln Center for the Performing Arts in New York, the Los Angeles Music Center, and the Tyrone Guthrie Theatre in Minneapolis all bear eloquent testimony to the success of community effort in at least partially counteracting the decline in theater facilities.

The second factor contributing to the difficulty of projecting theater use precisely is the high failure rate of new productions. Generally, about 85 per cent of shows produced on Broadway each year fail and close in less than 30 days. Of the 15 per cent which continue, no more than half, or a total of 7 to 8 per cent of all shows produced, are financial successes. Such obvious high risks produce two results: Finding venture capital is difficult, and the number of shows successful enough to tour the country varies sharply from year to year. The financial problem, of course, relates to long term trends in the industry. The variance in productions per year, however, makes prediction of annual use of new facilities subject to substantial deviations.

A final factor to be considered before examining San Francisco's program of musical and theatrical events is the recent introduction of theater-in-the-round to the Bay Area. Two such facilities, the Circle Star in San Carlos, and the Hyatt in Burlingame, opened in 1964. Although it is premature to evaluate their performance, both are reported to be doing well at this time. Some skepticism has been expressed, however, about the ability of the Peninsula to support two facilities so similar in concept and so close together.

The Peninsula theaters are part of the almost explosive growth of theater-in-the-round throughout the country. Whereas the economics of proscenium theater discourage private investment, the operating finances of theater-in-the-round are quite attractive. These theaters are not only cheap to construct, but also are able to operate at a fraction of the cost per performance of proscenium theater. Costs of scenery and stage labor are insignificant compared to costs of legitimate theater. Plainess of facilities and economies of operation combine to enable theater-in-the-round to break even at a reported 50 to 60 per cent utilization, and to achieve a return of investors' money within a two-year period. Thus, even if their popularity proves shortlived, capital exposure and risk are minimal.

Theater-in-the-round developers have concentrated upon suburbia, its economics and values, in location of facilities as well as in selection of performances. Enthusiasm of this market for live performances is attested to by the success of various facilities. Durability of the market in terms of long range acceptance of the entertainment medium has yet to be established. The impact of theater-in-the-round upon attendance at legitimate theater with its more sophisticated approach cannot be measured objectively. It is quite apparent, however, that one is not a substitute for the other either in terms of type of facility or type of performance. At this point it is reasonable to assume that although the two types of facilities compete for the entertainment dollar in a broad sense, theater-in-the-round as presently conceived is unlikely to woo away the serious theater devotee who forms the core of legitimate theater attendance.

MUSICAL AND THEATRICAL EVENTS IN SAN FRANCISCO

San Francisco supports an impressive program of both musical and theatrical arts. In addition to its nationally known opera company, San Francisco is the Western focus of ballet, features its own symphony orchestra, and supports a wide variety of traveling musical and dramatic presentations. The City also supports a vigorous program of little theater, as well as programs of children's opera and children's ballet. Table XXI shows the 1963 and 1964 calendars of musical and

Table XXI

CALENDAR OF MUSICAL AND THEATRICAL EVENTS, SAN FRANCISCO - 1963-19641/

						1963	Days of	Use					
	January	February	March	April	May	June	July	August	September	October	November	December	Total Year
Curran													
Theatrical Music	1	1	20 2	22	31	29	27 	27 	22	18	1	12 1	208 6
Geary													
Theatrical Music	10 	16 	18	16 	4	26 	23	23	21		1	12	170
Marines Memorial													
Theatrical Music	18 1	15 1	20 1	26 1	1					1	2	19 	101 5
Opera House Theatrical		1	1			14	27						43
Music	8	12	14	12	14	1			18	31	1	2	113
Veterans Auditorium													
Theatrical													
Music													
Civic Auditorium													
Theatrical	~-												
Music													
Masonic Auditorium													
Theatrical Music	3 	1	1	1			3	 5	1	1	==		4 12
			•	•					-	•			
Nourse Auditorium Theatrical													
Music		1	2										3
						1964	Days of	Use					
Curran			2/		2.1				2/		20		222
Theatrical Music	2	1	26 3	11	31	22 1	31	23	26 	4	30 2	19 1	223 10
Geary Theatrical	11	16		18		10		12	19	28	28	23	165
Music			1										1
Marines' Memorial													
Theatrical	19	17	16	28	26	22			- -	16	30	26	200
Music	1	1								2			4
Opera House													
Theatrical		1									10	11	22
Music	1	3	14	12	7	6			20	31	6	10	110
Veterans' Auditorium													
Theatrical			1			1							
Music			1			1					1		3
Civic Auditorium													
Theatrical Music												2	2
Masonic Auditorium Theatrical													
Music				2	4	7	5	5	4	3	2	1	33
Nourse Auditorium Theatrical													
Music		1	1	1	1						2	2	8

^{1/} Public events only. All theatrical usage based on length of booking period rather than performance days. Total theater days: 1963 - 526, 1964 - 610. Total music days: 1963 - 140, 1964 - 171.

Source: Economics Research Associates.

theatrical events and indicates major facilities of the City housing various activities. As shown in the footnote to the table, theatrical use days are based on the length of booking period rather than number of performances. No substantial error is introduced through this convenience; eight performances per week are offered for the typical dramatic presentation, which offsets counting calendar days when no performances are offered.

It would appear from the table that approximately three times as many theatrical productions than musical presentations are offered in San Francisco in a given year. This, however, is not an entirely accurate picture for several reasons. First, the difference between a theatrical event and a musical event is often simply semantic. For example, presentations of Civic Light Opera and ballet are traditionally categorized as theater presentations rather than musical. Grand opera, on the other hand, is considered a musical event. Such a comparison also ignores differences in attendance per performance and in facility capacities. The Opera House, for example, seats 3,250, whereas the Geary Theatre seats 1,480, and Marines' Memorial seats only a fraction of the latter. The pertinent point is that drama and theatrical activities in general are vigorous and important elements of the City's cultural program.

Although not entirely apparent from the table, each of the more important facilities shown specializes in certain types of events. The Curran Theatre with 1,750 seats is heavily dependent upon a single tenant, Civic Light Opera with 28 weeks of activity, for the bulk of its use. The theater also presents major plays and productions which impresarios feel have the greatest chance of achieving relatively large crowds in San Francisco, such as National Repertory Theater presentations and the D'Oyly Carte Opera Company.

The 1,480-seat Geary Theatre, on the other hand, has no prime tenant and books the majority of its program from road shows and plays supplemented by such activities as the San Francisco Ballet's spring season, the Ballet de Paris, the Ballet of Madrid, and individual headline performers. Whether many of the Geary's tenants would prefer to use the larger Curran but cannot because of the Civic Light Opera commitment is problematical. There is little question that this situation does occur in certain cases, since costs of bringing a show from the

East make the economics of playing in a small house questionable. Impresarios contacted indicated that a 1,600-seat theater in New York is about the minimum for financial success and that a West Coast house should be somewhat larger to provide an opportunity for the show to recapture transportation expenses. Over 70 per cent of the Geary's current schedule of productions emanate from New York.

Marines' Memorial Auditorium and the San Francisco Opera House, the remaining major theatrical facilities of the City, offer contrasts not only in size and appointments, but in types of performance housed. Marines' Memorial, houses an inadequate little theater and is a makeshift facility at best. The Opera House, on the other hand, is engaged for the most part in serving the needs of the San Francisco Opera Company and the San Francisco Symphony. Civic Light Opera also utilizes the Opera House to present top attractions which it believes will yield crowds the Curran cannot accommodate. Officials of this group indicate a preference for a facility seating approximately 2, 200 persons, and feel that the Opera House is much too large for even their peak show requirements. Thus events in neither facility are particularly germane to the potentials of the new theaters in question except to shed light on the cultural environment of the City. The remaining facilities indicated on the table are unsuitable for presentation of dramatic events because of inadequate staging facilities.

SAN FRANCISCO'S FACILITIES AND THE COMPETITIVE ENVIRONMENT

Although the Opera House's program of symphony and grand opera may be of only passing interest to assessment of Yerba Buena Center's theaters, a recently announced plan of expanding the Opera House's scope of facilities deserves careful consideration. As envisioned, this expansion revolves around construction of a large practice stage which would also serve as the performance stage for a 2,200-seat theater to be erected at the same time. Incidential to the plan would be refurbishment of the interiors of both the Opera House and nearby Veterans' Auditorium. The proposed new facilities, along with the aging Geary and Curran Theatres, represent the spectrum of major competitive facilities.

In evaluating facility needs, it should be remembered that any expansion of theatrical or musical event schedules in San Francisco is probably unlikely. At present, the City supports about 20 to 25 weeks of use of the 1,480-seat Geary Theatre, 30 to 35 weeks of use of the 1,750-seat Curran, and traditional seasons of ballet, symphony, and grand opera. As mentioned, scheduling of theatrical events is a function of the size and quality of the current crop of Broadway productions, over which the City has no control. Moreover, the existing schedule of local and West Coast produced activities has only minor opportunities for expansion. The possibility of expanding the Civic Light Opera schedule to 35 weeks per year in San Francisco has been considered, and under certain conditions might occur. Creation of a West Coast popular repertory theater group envisioned as the drama counterpart to Civic Light Opera has been under consideration for some time. However, no plans have yet been made for such a company.

Given these rather fixed event potentials, construction of new theater facilities in the City presumes either closing some of the less adequate existing theaters or drastically diluting the event schedules of each operating facility. With the age and condition of the Geary and Curran Theatres, their location on valuable real estate with higher land use potentials, and their less than optimum capacities, it can be assumed that these facilities would be razed if serious public support for new theaters is evidenced. Even if the Geary and the Curran remain in the competitive spectrum, their utilization would drop sharply given development of better theaters, and their eventual closing would be forced through economic circumstances.

Closing the Geary and Curran would provide a schedule of events available to new theater facilities. Although available events might support two new theaters, even under the most optimistic assumptions of cultural renaissance San Francisco could not support three new legitimate theaters in open competition with one another. Moreover, the introduction of a 2,200-seat theater in Civic Center in place of the 2,200-seat theater envisioned for Yerba Buena Center would create a disastrous set of economic circumstances for the 1,800-seat theater remaining in the south of Market area. The smaller theater would necessarily need to shoulder cost burdens which would otherwise have been shared between two facilities. In addition, the Civic Center theater under its proposed ballet and symphony usage

program would eliminate ballet as an event potential for the 1,800-seat theater, thus contributing even more to its economic woes. Under such circumstances, the smaller theater could not survive as a strong operating entity and probably would be labeled a white elephant.

If theater activity is to be incorporated in Yerba Buena Center at all, two alternatives are apparent. The first of these is a reevaluation of the program proposed for Civic Center which could retain plans for refurbishment of existing facilities, but eliminate construction of the 2,200-seat house. The second alternative is evolution of a policy of non-competition between public facilities. Such a policy would be subject to a number of difficulties in enforcement. Further, it is at variance with the proposed use program of the new theater in Civic Center which achieves its symphony usage at the expense of the Opera House. The policy might also invite substantial public criticism of overbuilding of facilities and wasteful planning which could jeopardize all cultural programs of the City. Finally, implementation of such a policy would do nothing to solve the diseconomies of operating more theater facilities than the City can support.

Some of the factors which bear upon the decision of type and location of theaters for San Francisco are summarized below:

- 1. San Francisco cannot economically support three new theaters of the size and scope proposed. Even two theaters tax existing and likely future event schedules.
- 2. Removal of the 2,200-seat theater from Yerba Buena Center would cause severe operating problems for the 1,800-seat facility.
- 3. Theater construction south of Market Street is an important element of the proposed redevelopment program for the area as presently conceived.
- 4. Many cities (including Los Angeles, New York, St. Louis, Philadelphia, and Pittsburgh) exploit the need for public facilities to solve civic problems of blight and undesirable land use. By so doing, tax dollars provide double benefits. A south of Market Street location affords such an opportunity.

5. South of Market Street is entirely appropriate to development of cultural facilities given implementation of the redevelopment program. Not only is the area superior to several other sections of the City, but experts in theater are not worried about playing in the area under the circumstances of redevelopment.

Questions of economic performance of the two theaters in Yerba Buena Center will be dealt with in subsequent material. To avoid clouding economic issues, it is assumed that a third theater will not be a competitive factor. Analysis would be unaffected by refurbishment of existing publicity owned facilities, but does presume no major rejuvenation of either the Geary or Curran Theatres.

USE, REVENUE, AND EXPENSES OF 2,200-SEAT AND 1,800-SEAT THEATERS IN YERBA BUENA CENTER

Given the activity patterns noted in preceding material, it is possible to estimate theater usage for each facility and to approximate income and expenses under certain assumptions. Assuming that Civic Light Opera expands its current 28-week schedule in the City to 35 (which they indicate is a distinct possibility given better facilities), the 2,200-seat theater would probably receive 42 weeks of use per year. This assumption, although perhaps optimistic, is reasonable for planning purposes. Given an average of eight performances per week, 336 performances per year might be expected. Moreover, it should be noted that almost 85 per cent of the theater's bookings would be with a single tenant receiving broad community support.

Use of the 1,800-seat theater would probably range between 20 to 30 weeks per year, although the pattern of use is much more tenuous and can fluctuate widely from these figures. For purposes of estimating revenue, a figure of 25 weeks per year is believed reasonable.

Attendance per performance is expressed as a factor of house capacity and is based on estimates of persons knowledgeable of San Francisco theater patronage. Civic Light Opera officials indicate that

a 90 per cent sale of 2,200 available seats can be attained for their productions with reasonably favorable show material. Such a high utilization is attributable largely to substantial season ticket support. Personnel at the Geary and Curran Theatres indicate a 75 per cent sell-out would be reasonable for planning purposes for theaters of the size and type envisioned.

Average ticket prices range from \$2.50 to \$7 for Civic Light Opera events, with a probable average of \$4.50. Ticket prices for other musical shows and theatrical events range from \$3.50 to \$7. A \$4.50 average ticket price is also used for these events.

Rental income to the theater depends upon the policy of calculating rents. The extremes of policy alternatives range from participation with show producers in a split of income to a strict four-wall rental of the facility. If the theater participates with show management and shares such expenses as advertising and promotion, staging, and cost of musicians, it is entitled to 25 to 30 per cent of the show's income. Such a high percentage is justified because not only does the theater provide a facility for production, but it also assumes a large share of promotional risk, since costs incurred are fixed but income is a function of success. Generally speaking, such a policy is commonly followed by commercial theaters, but rarely if ever by publicly owned facilities.

At the opposite end of the spectrum is the straight four-walls rental agreement, with the theater providing only the facility and the show producer responsible for such costs as ushering, ticket operations, and clean-up. Four-walls rental contracts are usually based on a flat fee, although some are also written as a percentage of gross income. The disadvantages of such a policy are that the caliber of personnel exposed to the public (ticket-takers, sellers, ushers, etc.) is not under the theater's control, and the theater is often incorrectly criticized for either behavior or appearance of these individuals. Some facilities have also experienced difficulties in attaining proper cleaning and maintenance under such a rigid rental arrangement, which places the burden of these expenses upon the show producer.

After considerable study, the Los Angeles Music Center evolved a compromise policy which seems to offer a reasonable model for planning purposes. Under the arrangement, the facility provides the basic

house staff of ticket-takers and sellers, ushers, clean-up personnel, box office supervisors, and sound technicians as well as house management. The lessee is responsible for all other required personnel and expenses. For this, the Music Center's schedule of charges is as follows:

		Minimu	m Charge
	Percentage	Sunday	
Consecutive	of Gross	Through	Friday and
Use Days_	Receipts	Thursday	Saturday
One or two	10%	\$500	\$575
Three or four	8	500	575
Five	6	500	575
Six or more	5	500	575

The only known exception to these charges is for Civic Light Opera, which has a flat rental agreement of \$4,250 per week for the 3,200-seat Pavilion.

Given the several factors introduced in preceding paragraphs, Table XXII summarizes use and income to the two theaters, including concession income but excluding any revenue accruing from parking of patrons' automobiles. Concession expenditures are estimated at 35 cents per capita with the theaters receiving 10 per cent of gross concession income. This is about 2 per cent higher than the Music Center receives from Fred Harvey for liquor, and 4 to 6 per cent higher than the typical occupancy expense of San Francisco cocktail lounges. The table shows a total income for the 2, 200-seat theater of \$176,400 per year, and income to the 1,800-seat theater of \$82,400. Income for the combined facilities is therefore \$258,800.

Table XXIII presents a budget of operating expenses using constant 1970 costs. Expenses are based on data and information obtained from Civic Light Opera Association concerning their San Francisco performances and modified to suit contemplated operating policies. Total operating expenses for the two theaters are estimated at \$331,400 per year, including an allowance for depreciation of equipment but not depreciation of facilities.

Table XXII

THEATER UTILIZATION AND REVENUE POTENTIALS (2, 200-seat and 1, 800-seat Theaters)

2,200-Seat Theater		
Principal tenant: Civic Light Opera		
Weeks of use		35
Performances		280
Average attendance per performance		1, 980
Total annual attendance		554,400
Average ticket price		\$4.50
Estimated annual income to tenant	\$2	,494,800
Rent of facility at 5 per cent of gross	\$	124,700
Gross concession revenue at 35 cents		
per capita	\$	194,000
Concession income to theater at 10		
per cent	\$	19,400
Theater income attributable to		
principal tenant	\$	144, 100
Other tenants:		
Weeks of use		7
Performances		56
Average attendance per performance		1,650
Total annual attendance		92,400
Average ticket price		\$4.50
Estimated annual income to tenants	\$	415,800
Rent of facility at 7 per cent of gross	\$	29, 100
Gross concession revenue at 35 cents		
per capita	\$	32,300
Concession income to theater at 10		
per cent	\$	3,200
Theater income attributable to other		
tenants	\$	32,300
Total income to theater	\$	176,400

Table XXII (Continued)

1,800-Seat Theater		
Weeks of use		25
Performances		200
Average attendance per performance		1,350
Total annual attendance		270,000
Average ticket price		\$4.50
Estimated annual income to tenants	\$1,	215,000
Rent of facility at 6 per cent of gross	\$	72,900
Gross concession revenues at 35 cents		
per capita	\$	94,500
Concession income to theater at 10 per cent	\$	9,500
Total income to theater	\$	82,400

Source: Economics Research Associates.

Table XXIII

THEATER OPERATING EXPENSE BUDGET, 1970 COST BASE

	2,200-Se	2, 200-Seat Theater	1,800-Se	1,800-Seat Theater	Unallocat	Unallocated Expense	T	Total
		Number of		Number of		Number of		Number of
Expense Category	Dollars	Employees	Dollars	Employees	Dollars	Employees	Dollars	Employees
Personnel								
House manager	\$ 9,500	7	\$ 9,500	1.0	1	1	\$ 19,000	2.0
Secretary	6,600	-	6,600	1.0	ľ	1	13,200	2.0
Maintenance supervisor	!	1	:	;	\$ 10,000	1	10,000	1.0
Telephone operator	1	ı	;	1	5,000	1	5,000	1.0
Box office treasurer	1	1	1	;	8,800	1	8,800	1.0
Bookkeeper	1	1	;	;	6,600	1	6,600	1.0
Electricians	10,000	1	2,000	0.5	1	1	15,000	1.5
Electronics technicians	7,000	1	3,500	0.5	1		10,500	1.5
Stage carpenter	4,500	1	4,500	0.5	;	1	6,000	1.5
Ticket sellers)	•	2			;	1	1	1
Ticket-takers /	23,5001/	3	9,8001/	2.0	1	•	33,300	1
Ushers /		22			1	1		
Janitors and maids	16,500	3	11,000	2.0	1	1	27,500	5.0
Watchmen		ı	;	;	11,000	2	11,000	2.0
·	1							
Direct personnel expense Pavroll taxes and benefits	\$ 77,600	ı	\$ 49,900	!	\$ 41,400	ı	\$168,900	1
at 25 per cent	19,400	ı	12, 400	;	10,400	1	42,200	;
Total personnel expenses	\$ 97,000	1	\$ 62,300	;	\$ 51,800	1	\$211, 100	;
Other Expenses								
Utilities	\$ 14,100	ı	\$ 10,500	;	1	1	\$ 24,600	1
Contract maintenance	8,000	1	6,500	;	:	ı	14,500	;
Miscellaneous expenses	8,000	ı	6,500	1 1	;	1	14,500	;
Depreciation of equipment	36,700	1	30,000	;	-	i	66,700	1
Subtotal, direct operating expenses	\$163,800	1	\$115,800	;	\$ 51,800	ı	\$331,400	!
Distribution of unallocated expense	\$ 36,400	ı	\$ 15,400	;	1	1	;	:
Total operating expenses	\$200,200	ı	\$131,200	!	;	ı	i i	1

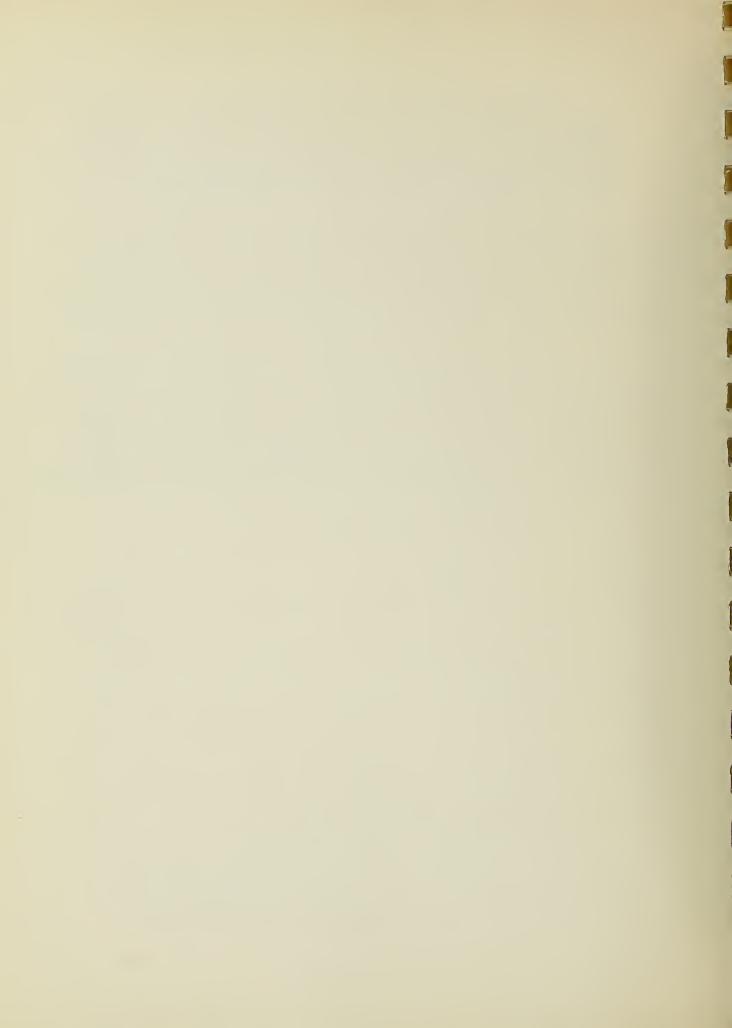
^{1/} Based on personnel shown at one-half day per performance.

Source: Economics Research Associates.

Although allocation of certain costs must be somewhat arbitrary, some measure of individual facility performance in terms of expenses can be approximated. The table indicates that using an allocation system based on facility utilization and size, the 2,200-seat theater will sustain operating expenses of \$200,200 per year, and the 1,800-seat theater will experience costs of \$131,200 per year.

Under the circumstances outlined, an operating loss of \$23,600 per year will be experienced by the larger theater, and a loss of \$48,800 per year by the smaller facility. Total operating loss of the complex is therefore projected at \$72,400 per year. Obviously, since revenues are volatile, the facilities could achieve break-even status in some years, but may lose more than the amount indicated in others.

It should be noted in passing that the remarks in the preceding section concerning the facilities provided in other cities which operate at a loss are applicable here as well. Stanford Research Institute projected a substantial annual loss for the Los Angeles Music Center (excluding parking), and yet the facility was built. Moreover, early indications are that operating losses will be incurred by the Music Center in spite of the bulge in attendance that traditionally accompanies opening a new facility.



Section V

A MUSEUM IN YERBA BUENA CENTER

Whether a museum is an appropriate element of Yerba Buena Center is not a question of direct economic benefit, but more of indirect and planning benefits. This is because virtually all museums are open to the public free of charge, and even those which do levy a small admission fee use the proceeds for enhancing collections or for other expansion of museum activity. Considered a vital part of the community's cultural life, the typical museum is operated as a public service and depends upon either governmental subsidy or private patronage to defray expenses.

Complicating the evaluation of a museum in Yerba Buena Center is the fact that not even the general nature of the proposed facility has been decided upon at this time. Thus the criteria which would ordinarily be brought to bear on the analysis -- factors of previous community support for similar facilities, comparable data from other cities throughout the country, evaluation of groups whose educational and/or income levels make them likely museum supporters -- all are irrelevant in this instance. The present state of museum planning offers literally nothing to serve as a basis for comparison. In this situation, the appropriateness of a museum to Yerba Buena Center must be measured from two more general viewpoints. On one hand, indirect benefits to the center are a criterion. On the other, the value of the center's environment to the museum is also a factor. As will be apparent, many conditions affecting one viewpoint are also important to the other. Following paragraphs explore these two viewpoints.

Several considerations are important in evaluating what a museum can do for the Yerba Buena Center cultural complex. First, a well developed museum whose content is of broad public interest strengthens even further the cultural image of the center, which otherwise rests for the most part upon theater activity and aesthetics. A museum not only strengthens the image of cultural content, but it also broadens the center's exposure to the public. This is true because museums traditionally are daytime activities with Sunday peaks in

attendance. Theaters, on the other hand, are evening activities and are usually dark on Sunday. Thus, a museum would tend to balance pedestrian activity in Yerba Buena Center, giving it a more constant flow.

Second, a museum is a traffic generator of some magnitude, and museum attendees would provide economic benefit to service businesses and garages in the area. The measure of this benefit cannot be taken at this point, since it is impossible to predict attendance at a museum whose nature is completely unknown. Even a crude approximation of attendance cannot be determined, since square footage of facility is a meaningless criterion. Attendance at museums depends heavily on content and program; size of facility or even size of area served are of much lesser importance. This is illustrated by the attendance data shown in Table XXIV for selected museums. Not only is the range of attendance for museums in general extremely wide, but it is equally wide for different types of institutions serving the same area. At this point, prediction of attendance is less important than noting that a museum is a significant traffic generator in most instances, and that such traffic is important to the center both in terms of achieving a balance of activity and indirect economic benefit.

From the museum's standpoint, much of the argument showing how the museum benefits the center is also applicable in terms of how the center might benefit the museum. Being part of a program of facilities and activities with strong cultural emphasis is important to most museums, and aids in establishing their image. The balance of activity is important too, in that needed parking facilities and available service businesses (such as restaurants) are likely to have an optimum availability to museum patrons during peak periods of museum activity. Such, of course, would not be the case if the museum were coupled to other major daylight cultural activities.

A final advantage to a museum in Yerba Buena Center lies in its ability to serve a broadened market of San Francisco citizens by virtue of location. Quite obviously the focal point of San Francisco is upon its downtown area. Pedestrian activity peaks downtown, giving a museum the opportunity to capitalize upon this flow of people. With public service as its goal, a museum located in the heart of downtown activities could achieve patronage and attendance from casual

Table XXIV

ATTENDANCE AT SELECTED MUSEUMS

New York	
Metropolitan Museum of Art	2,500,000
Museum of Natural History	1,800,000
The Cloisters	900,000
Museum of Modern Art	750,000
Chicago	
Museum of Science and Industry	2,500,000
Museum of Natural History	1, 100, 000
Art Institute	1,000,000
Alt institute	1,000,000
Washington, D.C.	
Smithsonian - Arts and Industry	2,300,000
Smithsonian - Natural History	1,500,000
Smithsonian - Aircraft	700,000
San Francisco	
M. H. de Young Memorial Museum	1,364,000
San Francisco Museum of Art	200,000
San Taneisco Mascalli ol III	200,000
Other California Cities	
Museum of Science and Industry,	
Los Angeles	1,730,000
Huntington Library and Art Gallery,	
Pasadena	304,000
Crocker Gallery, Sacramento	62,000
Fine Arts Gallery of San Diego	125,000
La Jolla Museum of Art	50,000
Oakland Art Museum	40,000

Source: Economics Research Associates.

visitors who might not make a special trip to visit an outlying facility. This could not only produce enhanced attendance, but could increase public support for the museum's programs.

Section VI

PROJECTED USE AND ECONOMIC PERFORMANCE OF 1,900-STALL AND 1,400-STALL GARAGES

The sports arena, exhibit hall, theaters, and museum obviously generate demand for parking space to support their activity program. Provision of parking garage facilities solely to service these needs clearly would be uneconomic. To achieve satisfactory economic performance, parking garages must depend upon demand generated by other land uses in the area.

At present, parking lots and garages take up a large portion of the two blocks upon which public facilities are to be built. Therefore, some measure of parking demand is self-evident. Since the contemplated redevelopment program involves major changes in land use patterns in the area, future demand for parking is less clear. Following paragraphs explore the factors conditioning future demand as well as patterns of supply. These data will be converted into the likely economic performance of both the 1,900-stall and the 1,400-stall garage to be constructed as part of the public facilities program.

A major assumption involved in the subsequent analysis is that the San Francisco Redevelopment Agency will not evolve a parking program as an interim land use for any of the area if such a program would be in competition with the two garages. It is also assumed that garages will be under municipal sponsorship, with operating programs similar to such facilities as Fifth and Mission Parking, Sutter Stockton Garage, or Civic Center Plaza Garage.

PARKING DEMAND

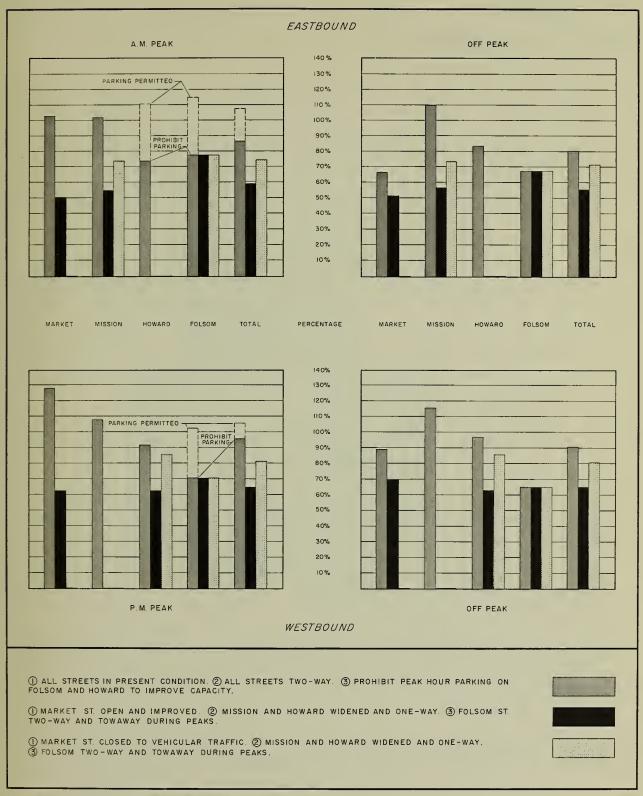
Demand for parking space in a given area is generally a function of two factors, one of which generates parking demand, and a second regulates or governs the amount of demand. Land uses are the basic generators of demand for parking, and the amount of demand generated varies substantially depending upon the use. Without regard

to the amount of demand generated, however, street and traffic systems condition and regulate the amount of parking demand that can be realized. Phrased another way, land use creates potential demand, but actual or effective demand is a function not only of land use but of the ability of street systems to carry the traffic generated by land use patterns. Both factors must be examined before a realistic appraisal can be made of either gross demand for parking or potential garage utilization.

Capacity of the Street System

In common with all of downtown San Francisco, major thorough-fares south of Market Street currently suffer from congestion both at peak and off-peak hours. During peak hours, Market, Mission, Howard, and Folsom Streets all operate either near or in excess of capacity, according to studies by the Bureau of Engineering of the City and County of San Francisco. Moreover, Mission Street operates in excess of capacity even during off-peak periods.

It must be assumed that steps will be taken to rectify this situation. A number of proposals have indeed been made, but no concrete plans have been prepared since the eventual development program proposed for the south of Market area is still in the formative stage. Two of the known proposals would be consistent with the circulation plan adopted by the Redevelopment Agency. Given implementation of either of these proposals, street congestion would be substantially alleviated. Figure 7 shows the existing condition of peak and off-peak traffic on the streets noted above, as well as the future condition given implementation of either of the proposals consistent with the circulation plan of the Agency. It is apparent from the figure that either improvement would provide the needed relief. Such relief would remove most if not all the restrictions upon parking demand imposed by the capacity of the street and circulation system. Thus, given these improvements, parking demand would be free to respond to land use patterns.



SOURCE: CITY AND COUNTY OF SAN FRANCISCO.

Figure 7
TRAFFIC CONDITIONS ON MAJOR THOROUGHFARES

Land Use and Parking Demand in the South of Market Area

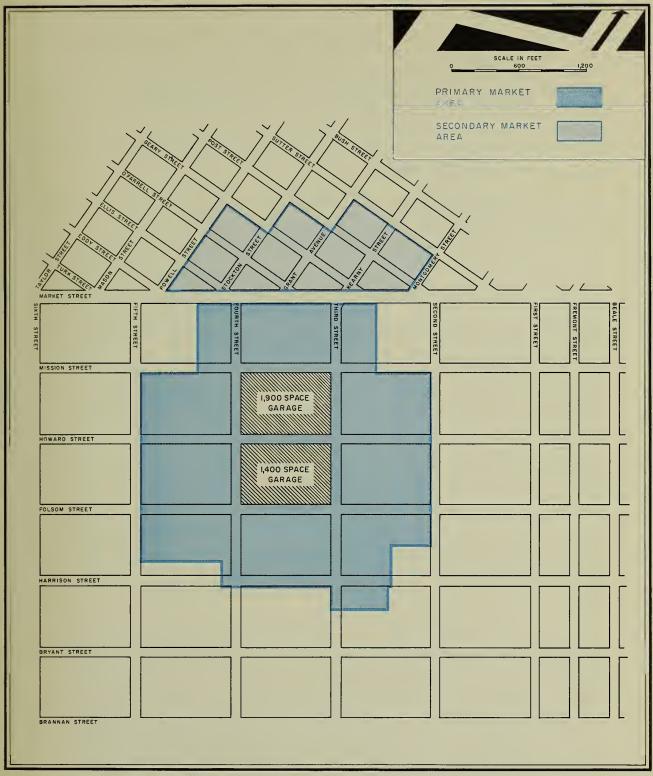
The market area for a parking garage and consequently the area within which land uses must be evaluated is defined by the distance people are willing to walk from their parking space to their destination. This distance varies considerably for various cities, depending upon the availability and cost of parking and its location. Based on a 1957 survey by The Eno Foundation for Highway and Traffic Controls, the following distances were observed for over 50 major United States cities:

Frequency Distribution of Walking Distance from Parking Space to Destination, Off-Street Pay Parkers

on street ray rarkers	
Distance	Cumulative
(feet)	Percentage
Less than 350	45%
Less than 750	68
Less than 1,150	81
Less than 1,550	89
More than 1,550	11
Average (mean) distance walked - 799 feet	;
Average (median) distance walked - 730 fe	et

Given these data, the fact that traffic in San Francisco has been increasing at approximately 2 to 4 per cent per annum with concomitant pressures on parking, and the parking characteristics of the downtown area, a primary market for the garages is defined as being within 1,000 feet of the garage perimeters. Because of the relative scarcity of monthly parking space north of Market, coupled with heavy demand from office workers in that area, a secondary market for monthly parking from north of Market Street patrons is also in evidence. Figure 8 shows the geographic coverage of both primary and secondary markets. It is evident that a substantial portion of the total market area for the various garages lies outside the immediate project area of the redevelopment program.

Within the primary market, parking demand will be created by trips to work, business visits to establishments in the area, shopping



SOURCE: ECONOMICS RESEARCH ASSOCIATES.

Figure 8

PRIMARY AND SECONDARY MARKET AREAS FOR PARKING FACILITIES IN YERBA BUENA CENTER

trips, and visits to service establishments. In the secondary market, only monthly parking demand need be considered. This is realistic since employees are willing to walk approximately 20 per cent further from parking place to destination than are business visitors or shoppers, according to Eno Foundation data. Thus, although employees' demand for monthly parking north of Market is a factor, it is unlikely that serious demand will be evidenced from business visitors or shoppers to north of Market destinations.

Given the definition of the markets as outlined, it is next necessary to develop information on employment, business visitation, and mode of worker transit for the various economic activities in the primary market. If these data are related to the amount of square feet of various land uses, it is possible to estimate parking demand under circumstances of redevelopment. An economic profile of the south of Market area was compiled by the San Francisco Redevelopment Agency in 1963 on the basis of a detailed survey of business establishments in that sector. This survey is not only the most recent evaluation of the area, but also contains details of activity not usually found in the typical economic evaluation. Table XXV summarizes the survey data pertinent to assessing parking potentials. The table shows the space per employee, the percentage of employees commuting by automobile, and the number of business visitors to the firm per employee per day for three major land uses. As might be expected, numerical value of these several factors differs substantially depending upon the land use.

The next step in analysis is determinating the square footage of the various land uses categorized that is expected to be within the market area of the garages after redevelopment. Given this information, transient as well as monthly parking demand can be readily estimated.

Square footage and employment data for economic activities retained within the redevelopment area were supplied by the Redevelopment Agency. Square footage of new activities in the project area was evolved from the contemplated land use program envisioned by Real Estate Research Corporation. It should be noted that the category of other uses includes office and manufacturing activities which will provide for the bulk of their own parking needs on site. Potential demand from this source, therefore, will be of no consequence to subsequent evaluation.

Table XXV

SELECTED CHARACTERISTICS OF SOUTH

OF MARKET STREET EMPLOYEES BY CATEGORY

	Square Feet Per Employee	Percentage of Employees Commuting by Auto	Visitors to the Firm Per Employee Per Day1/
Office Space			
Contract construction Transportation and	286	95%	0.61
communication Finance, insurance, and	252	14	0.40
real estate Average (weighted for	276	52	0.75
employment)	258	24	0.44
Retail Trade and Services			
Retail trade Services Average (weighted for	786 797 <u>2</u> /	37 29	3.25 0.82 <u>3</u> /
employment)	792	36	1.85
Other Activities			
Manufacturing	628	43	0.54
Wholesale trade Average (weighted for	1,017	50	1.21
employment)	783	45	0.81

^{1/} Visitors arriving by automobile only.

Source: San Francisco Redevelopment Agency, Commercial and Industrial Survey, and Economics Research Associates.

^{2/} Excludes hotel category.

^{3/} Excludes hotel and auto service categories.

Determining the quantity of various land uses within the market area of the garages, but outside the project area, was accomplished through a land use inventory. For the south of Market area, land use maps prepared by Livingston and Blayney, City and Regional Planners, were used to classify both ground floor and predominant upper story use. Dimensions were measured from large scale Sanborne maps, and from these data gross area of the three major land use categories was calculated. Given the average age, condition, and type of structures in the area, building efficiencies were estimated and applied against gross area to yield a reasonable approximation of square footage of usable or leasable area.

For the north of Market Street portion of the market area (the secondary market), only an inventory of office space was available. Since this is the use of overwhelming importance to monthly parking demand, it was considered sufficient. The block-by-block inventory was supplied by Real Estate Research Corporation in keeping with the cooperative agreement between Agency consultants.

Table XXVI summarizes the data obtained, indicates estimated employment, number of employees' automobiles, and the estimated number of visitors per day where appropriate. The table thus provides a summary of daytime parking demand created by major land uses in both primary and secondary market areas. The table shows parking needs for 6,950 transient vehicles per day and monthly parking demand for 4,960 automobiles. Of the monthly parking demand, almost 57 per cent accrues from the primary market area, with the secondary market area contributing the remainder. The table does not indicate the amount of parking demand generated by events scheduled for the arena-exhibit hall complex or the theaters. These additions to demand are discussed later.

To the extent that existing land uses outside the redevelopment area change, parking demand estimated by the methodology given is subject to error. Such error is unlikely to be serious, however, and may be assumed to be on the conservative side since the trend of rising land values noted in downtown San Francisco will probably produce

^{1/} Wendt, Paul F., The Dynamics of Central City Land Values,
San Francisco and Oakland, 1950 to 1960. Berkeley: Real Estate
Research Program, Institute of Business and Economic Research,
University of California.

Table XXVI

DAYTIME PARKING DEMAND FACTORS WITHIN THE MARKET AREA OF PROJECT GARAGE, BY DEMAND SOURCE AND TYPE $^{1}/$

	Square Feet of Space	Estimated Employment	Employees Commuting by Auto	$Autos \frac{2}{}$	Estimated Visitors Per Dav ³ /
Activities Retained in Project Area					
Office	917, 500	3,800	006	720	1,670
Retail and services	258, 100	300	100	80	960
Other uses	781,800	1,000	500	400	810
New Activities in Project Area					
Office	250,000	1,000	200	160	440
Retail and services	40,000	50	20	20	90
South of Market Activities Outside Project Area					
Office (65 per cent efficiency)	1,200,000	5,000	1,200	096	2,200
Retail and services (75 per					
cent)	163,900	200	20	09	370
Other uses (75 per cent)	816, 200	1,000	200	400	810
North of Market Office Space	1,300,000	5,400	2,7004/	2, 160	N. A.
Total Daytime Demand	;	1	;	4,960	6,950
South of Market	;	-	;	2,800	6,950
North of Market	;	;	:	2,160	1

N. A. = Not Applicable.

Excludes demand generated by major public land use program.

^{2/} Based on 1.25 occupants per vehicle.

Car occupancy assumed to be 1.0 persons. Only visitors arriving by auto are counted. Assumes 50 per cent to commute by auto.

more intensive rather than less intensive use. An unknown which must be approximated, however, is the likely impact of rapid transit upon parking demand.

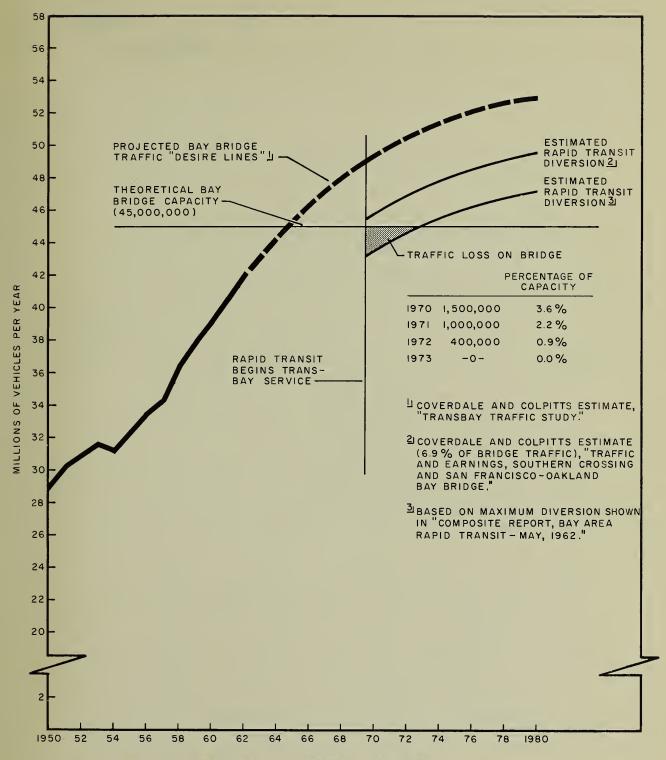
Some measure of the most likely effect of the advent of rapid transit upon parking requirements can be determined from an examination of traffic trends. As noted, the City's Bureau of Engineering expects traffic on surface streets to continue increasing at approximately 2 per cent per annum. Since the estimates were made after announcement of the rapid transit system routes, the effects of the system were no doubt taken into consideration. Under these conditions, there would, of course, be no adverse impact on parking demand.

Other studies have also been made which shed light upon the likely impact. The most recent survey of traffic in the Bay Area was the Transbay Traffic Study conducted by the State of California in 1962. Traffic projections for the San Francisco-Oakland Bay Bridge are of particular interest since this facility will be most affected by the transit system. Figure 9, which summarizes data derived from this report, indicates that rapid transit might produce a loss of traffic on the bridge for a maximum of three years. After that time (by 1973) the bridge would again be operating at theoretical capacity. From these data it may be concluded that the effect of rapid transit upon demand for parking will be negligible, and at worst will create some dip in demand during the 1970-1973 period.

PARKING SUPPLY AND ITS RELATIONSHIP TO DEMAND

An inventory of the amount, type, and characteristics of parking supply was compiled by the San Francisco Redevelopment Agency. The more pertinent findings are summarized in Figure 10, which shows the amount and type of parking space available, project boundaries, and primary and secondary market area boundaries for the two garages.

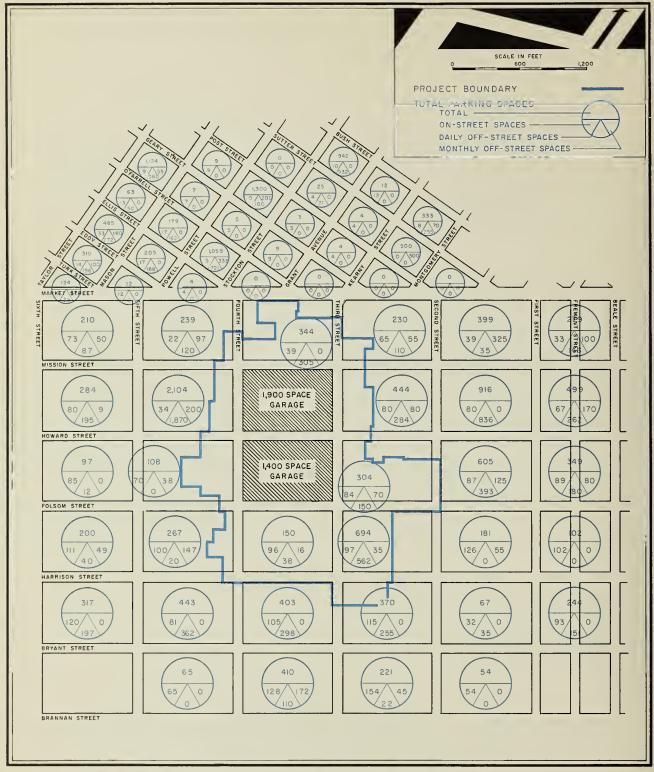
Determining the actual parking supply within the market areas is subject to further refinement. Total supply of transient stalls within the primary market area is 5,600. However, some of this supply



SOURCE: AS INDICATED IN FOOTNOTES, AND ECONOMICS RESEARCH ASSOCIATES.

Figure 9

ESTIMATED EFFECTS OF RAPID TRANSIT
ON SAN FRANCISCO-OAKLAND BAY BRIDGE TRAFFIC



SOURCE: SAN FRANCISCO REDEVELOPMENT AGENCY.

Figure 10

PARKING SPACE AVAILABILITY BY TYPE IN MARKET AREAS OF THE PROPOSED GARAGES

(notably Fifth and Mission Parking) services retail, office, and service business needs not within the market area. Therefore, the number of transient stalls which will compete with the new garages is less than total supply. A reasonably conservative adjustment would be to reduce supply by 1,000 stalls to account for this, since such major retail activities as The Emporium require large amounts of parking space but are not within the defined market area. No such adjustment is needed for monthly stalls, of which there are 1,140 south of Market and approximately 1,000 north of Market.

Relationship between supply and demand is more clearly understood given a conversion of transient stalls needed and transient stalls available into the common denominator of available stall hours. Accomplishment of this for the demand side of the equation rests upon knowledge of the average length of time transient vehicles are parked. Table XXVII shows this information for various San Francisco garages, including the nearby Fifth and Mission facility. On the basis of this information, an average parking period per vehicle parallel with the experience of Fifth and Mission seems warranted. Thus, transient demand of 6,950 vehicles per day can be converted to 21,545 stall hours of demand per day.

Development of a similar measure for supply involves two steps. First, the number of operating hours must be set, and then maximum possible operating efficiency of garages must be determined. The latter step is necessary because no garage operates at 100 per cent efficiency. Peaking of demand and frictional time loss in stall occupancy account for this.

For planning purposes, a 14-hour operating day covers the bulk of traffic and parking demand and is used in the calculation of supply. Most authorities agree that maximum operating efficiency of any garage servicing transient volumes is about 80 per cent. If efficiencies are higher, long queues of cars waiting to park usually result. As is noted in Appendix Table B-I, Union Square Garage would be operating at an efficiency of 79.9 per cent given these criteria -- which suggests their reasonableness. Applying these two sets of criteria to existing garage supply in the market area indicates a total availability of 51,520 stall hours per day.

Table XXVII

AVERAGE PARKING TIME PER CAR AND AVERAGE PARKING REVENUE PER CAR, SELECTED SAN FRANCISCO PARKING GARAGES

<u>Facility</u>	Hourly Rate	Revenue Per Car <u>l</u> /	Average Parking Time (hours)
Fifth and Mission Parking	\$0.15	\$0.47	3. 1
Civic Center Plaza	0.20	0.67	3.4
Sutter Stockton Garage	0.25	0.76	3.0
Union Square Garage	0.25 <u>2</u> /	0.97	3.9
Portsmouth Square Garage	0.25	0.72	2.9

Source: City and County of San Francisco Parking Authority and Economics Research Associates.

^{1/} Calculated for transient parking only. Excludes monthly parking and non-parking revenue such as gasoline and oil sales.

^{2/} Rate is 50 cents for first two hours or fraction thereof and 25 cents per hour thereafter.

Table XXVIII summarizes supply and demand factors developed, and is largely self-explanatory. Monthly demand from north of Market Street activities is expressed in terms of net demand for south of Market Street facilities by deducting available supply north of Market which would, of course, be more desirable to a north of Market commuter. The table indicates, in summary, a transient demand for 21,545 stall hours per day in the market area, and a monthly demand for 3,960 stalls. Available transient supply in garages amounts to 51,520 stall hours per day, with an additional 12,800 stall hours per day available at the curb. Monthly supply south of Market Street totals 1,140 stalls. Thus, there is a surplus of demand for monthly space on one hand, and an oversupply of transient space available on the other.

Allocation of Stalls in New Garages --Monthly Versus Transient

Supply and demand factors alone are not the governing criteria which dictate stall allocation for the new garages. Such factors as the comparative transient and monthly rate structures prevailing as well as specifics of location must also be evaluated.

Rates in the area vary widely, ranging from 15 to 50 cents per hour for transient parkers, and from \$6 to \$25 per month for monthly patrons. Since it is anticipated that the two new garages will be municipally operated, it may be reasonably assumed that their rates will parallel those of Fifth and Mission Parking, which has a prevailing schedule of 15 cents per hour for transient and \$17.50 per month for monthly parking. Because Fifth and Mission is also the major competitive facility, the assumption is even more valid.

Given the indicated rate structures, the maximum attainable revenue per stall per day is \$1.68 with a 14-hour operating day and an operating efficiency of 80 per cent. Revenue per stall per day from monthly parkers is only 69 cents (based on a 305-day year). Thus, if a new garage can attain a utilization of 41 per cent or more (\$0.69 ÷ \$1.68 = 41 per cent), economics favor allocation of space to transient vehicles until transient utilization drops below 41 per cent. Actually, a 40 per cent utilization is more realistic given the potential increase in traffic attributable to the transient stall -- which also means increased sales of gasoline, oil, etc.

Table XXVIII

SUMMARY OF DEMAND AND SUPPLY FACTORS WITHIN MARKET AREA OF GARAGES

Summary of Transient and Monthly Parking Demand

Transient Demand	
Transient automobiles per day with destinations	
in the market area	6, 950
Average stall occupancy per vehicle	x3.1 hours
Average transient demand (stall hours)	21,545
Monthly Demand	
North of Market Street	2, 160
Less north of Market Street supply	-1,000
Net demand from north of Market Street	1, 160
South of Market Street	2,800
	3,960

Summary of Transient and Monthly Parking Supply

Transient Supply South of Market	4,600 <u>1</u> /
Stall hours per day per space	<u>x14</u>
Total stall hours	64, 400
Maximum utilization attainable	0.80
Total available stall hours	51,520
Monthly Supply South of Market (stalls)	1,140

Table XXVIII (Continued)

New Supply - Unallocated	
Mission, Howard, Third, and Fourth	
Streets Garage	1,900
Howard, Folsom, Third, and Fourth	
Streets Garage	1,400
Curb Space	1,140
Hours during which curb space competes	14
Curb space hours available	15,960
Maximum utilization attainable	80%
Total available curb space hours	12,768

^{1/} Actual supply within designated market area less 1,000 stalls estimated at Fifth and Mission Parking for service of retail area outside market area of garages.

The number of stalls allocated to transient use in either garage before utilization of transient space drops below 40 per cent is conditioned by location with respect to traffic generators. In this regard, the 1,900-stall garage is in a favorable location to exploit transient volumes. Not only is its Mission Street frontage of prime importance but also its proximity to Market Street and the planned mall leading from Market to Mission give the 1,900-stall garage decided competitive advantages. The 1,400-stall garage, on the other hand, is poorly located to achieve substantial measures of transient volume. Howard Street is not expected to be a major commercial street generating transient demand, and the land to the rear of the garage will be occupied for the most part by tenants with their own-on-site parking.

Thus location as well as market provide a polarity of opportunities for the two garages. On one hand, they can assume a relatively docile competitive position and seek only monthly parkers. On the other, they can compete more aggressively for the type of available business most appropriate to their location. Table XXIX summarizes stall allocations under both alternatives and indicates the effect either alternative would have upon utilization of other facilities in the market area. Alternative 2 assumes the larger garage can capture 40 per cent of the available transient demand, but that the smaller garage can capture only 5 per cent of this demand. In light of location and surrounding land uses, the market penetrations are realistic. Since this alternative will yield more favorable operations and is consistent with potentials of the two facilities, stall allocations given in Alternative 2 are used for all subsequent calculations.

ECONOMIC PERFORMANCE OF THE GARAGES

Given the stall allocations noted and prevailing rates, it is possible to calculate income potentials of the two facilities. Basic operating data is shown in Table XXX in summary form and indicates not only the information for daytime transient and monthly parkers, but parking hours for events held in the arena-exhibit hall and the theaters as well. The latter data is based on approximate attendance introduced earlier, and assumes that 75 per cent of attendees arrive by automobile and that the average party size is 2.5 persons. In addition to basic utilization data indicated, the table also shows typical

Table XXIX

EFFECT OF ALTERNATIVE ALLOCATIONS OF SPACE IN 1,900-STALL AND 1,400-STALL GARAGES UPON EXISTING FACILITIES

Alternative 1: All stalls in both garages allocated to monthly parking

Effect on average utilization of presently existing transient facilities:

None

Utilization (including curb space) = 26.8% (excluding curb space) = 33.5

Effect on monthly facilities: to achieve 100 per cent occupancy, the garages compete with existing facilities for 480 spaces

Demand 3,960

Less new facilities at 100% 3,300

660

Less existing supply 1,140

Oversupply (480)

Alternative 2: Stall allocation based on ability of garages to achieve optimum market penetrations of transient market and allocation of balance of spaces to monthly parking.

1,900-stall 40 per cent market penetration of transient market garage 1,540 stalls transient, 360 stalls monthly

1,400-stall 5 per cent market penetration of transient market garage 190 stalls transient, 1,210 stalls monthly

Effect on average utilization of presently existing transient facilities:

Utilization (including curb space) = 14.8% (excluding curb space) = 18.4

Effect on monthly facilities:

Demand	3,960
1,900-stall garage (monthly stalls)	360
1,400-stall garage (monthly stalls)	1,210
Existing supply	1,140
Unsatisfied demand	1,250

 $\frac{{\tt Table~XXX}}{{\tt SUMMARY~OF~SELECTED~OPERATING~FACTORS}}$

<u>Item</u>	1,900-Stall Garage	1,400-Stall Garage
Transient Parking Factors		
Number of transient stalls	1,540	190
Operating hours per day	x14	x14
Available transient stall hours	21,560	2,660
Operating utilization ratio	40%	40%
Stall hours used per day	8,624	1,064
Stall hours used per year	2,630,320	324,520
Average vehicle stay (hours)	3.1	3.1
Number of vehicles parked per year	848,490	104,680
Monthly Parking Factors		
Number of monthly stalls	360	1,210
Vehicles use days per month per stall	20	20
Vehicle use days per month	7,200	24, 200
Vehicle use days per year	86,400	290,400
Event Parking		
Arena-convention:		
Estimated vehicles		300,000
Hours of stay per vehicle		2.5
Hours of parking		750,000
Theaters both:		
Estimated vehicles	300,000	
Hours of stay per vehicles	2.5	
Hours of parking	750,000	

Table XXX (Continued)

	1,900-Stall Garage	1,400-Stall Garage
Operating Ratios		
Percentage of revenue:		
Payroll	30%	30%
Other expenses	<u>15</u>	15
Total	45	45%
Income Other Than Storage		
Gross profit on sales of gasoline,		
oil, and accessories per vehicle		
parked	\$0.03	\$0.03

operating ratios of revenue to expense and typical income per car from sources other than storage. More detail on operating ratios, comparative operation of San Francisco garages, and other factors pertinent to garage operations is shown in the several tables of Appendix B.

A summary of economic performance of the two facilities is presented in Table XXXI in terms of income, expense, and operating profits. The table indicates that combined garage operations will contribute \$580,600 per year toward debt service. No purpose would be served by presenting financial data for the garages as separate operations, since utilizations, space allocation, and distribution of event income presume existence of two facilities. Separate presentation, therefore, would be misleading since it would not indicate the individual performance of each facility if developed separately, but rather would show only a proration of the economics of joint development of the structures.

Table XXXI

CALCULATION OF INCOME AND EXPENSES, COMBINED GARAGE OPERATIONS

Income, expenses, and gross operating profit at prevailing parking rates

Transient stall hours of use per year Current parking rate per hour	2,954,840 \$0.15
Subtotal	\$ 443,230
Event stall hours of use per year Current parking rate per hour	1,500,000 \$0.15
Subtotal	\$ 225,000
Monthly parkers	18,840
Current parking rate per month	\$17.50
Subtotal	\$ 329,700
Total income from storage	\$ 997,930
Total vehicles parked per year	1,929,970
Gross profit per vehicle from gasoline,	
oil, and accessory sales	\$0.03
Gross profit from gasoline, oil,	
and accessory sales	\$ 57,900
Total combined garage income	\$1,055,800
Operating expenses	475,200
Income available for debt service	\$ 580,600



Section VII

COSTS AND ECONOMIC PERFORMANCE OF THE PUBLIC FACILITIES IN YERBA BUENA CENTER

Probable operating performance of the several components of Yerba Buena Center have been covered in preceding material. Market support, revenue, expenses, and operating profits or losses have all been documented. Table XXXII summarizes operating profits and losses for the various facilities and indicates that the total complex will show an annual operating profit of approximately \$428,000 per year. Following material will place these data in context with facility and financial costs involved in implementing the program and will suggest appropriate financing.

The income indicated above includes no revenue from the possible leasing of air rights on the plazas of the block nearest Market Street, nor are subsequent project costs reduced to reflect air right values which might be sold. This was not done because under existing circumstances valuation of air rights is not practical.

As with the value of land, the value of air rights is based on contemplated use. Moreover, even given specific land use patterns to be established on air rights, the value of the rights is the difference between the price a purchaser is willing to pay for the land and the cost of constructing the platform or supporting structure on which development will take place. Thus, if a user were willing to pay \$15 per square foot for land suitable for high rise development, and the costs of supporting structures necessary to create air rights above the plaza were \$14 per foot, air rights value would be \$1 per square foot minus a decrease in utility the site incurs by not permitting basement development. Thus the key question of valuation of air rights is a structural engineering problem concerned with platform or supporting structure costs.

Conversations with structural engineers indicate that unless design of the specific building planned for air rights were evolved simultaneously with garage and plaza design, costs of constructing the

Table XXXII

OPERATING REVENUE AND EXPENSES, PUBLIC AND SEMI-PUBLIC FACILITIES, YERBA BUENA CENTER

	Revenue	Expense	Operating Profit (Loss)
Sports arena convention- exhibit hall	\$ 424,500	\$ 505, 800	\$(81, 300)
2,200-seat theater	168, 300	196, 400	(28, 100)
1,800-seat theater	95,000	137,600	(42,600)
Museum	N.A.	N.A.	N.A.
Parking garages (combined operations)	1,055,800	475,200	580,600
Total facilities (Plan A)	\$1,743,600	\$1,315,000	\$ 428,600

N.A. = not applicable.

platform or columns would probably be prohibitive. On the other hand, given concomitant development of various structures, additional costs might be modest. Yerba Buena Center has obviously not yet arrived at phases of leasing or sale and building design. Thus, the possibility of achieving air rights is admitted, although it is not possible to estimate what air rights values might be. To the extent that such values are not included in financial data, such data are conservative.

In contrast to the technical difficulties of determining platform costs, it is possible to approximate other facility costs with sufficient accuracy for planning purposes. Although specific costs are functions of engineering and design, cost experience of other cities in developing public facilities can serve as guidelines to financial evaluations if adjusted for differences in time and location. Tables XXXIII, XXXIV, and XXXV present these basic data for arenas, theaters, and parking structures, respectively. Arena costs examined are those experienced by Portland and Los Angeles as well as the proposed Oakland facility. Theater costs cover recent developments in Los Angeles, New York, Indianapolis, Phoenix, Toronto, and San Diego. Garage costs are those experienced by the San Francisco Parking Authority for local facilities. All costs are expressed in terms of dollars per unit of capacity. The tables adjust these various costs for differences in location of the facilities, as well as for differences in time of construction. Costs are expressed both as actual and for San Francisco in January 1965. Costs indices used are those prepared by Engineering News Record.

From the data given in preceding tables, it is possible to approximate costs of developing the San Francisco facilities in 1967. These estimates are shown in Tables XXXVI and XXXVII for the arena-exhibit hall and the 1,400-stall garage servicing these facilities, and for the two theaters and the 1,900-stall garage, respectively. To the basic costs shown have been added a contingency factor of 10 per cent and cost escalation factors of 5.3 per cent per annum for structures and 2.5 per cent per annum for equipment. Cost escalation is based on the increase in construction costs recorded in San Francisco by Engineering News Record during the past decade, and on average gain in wholesale equipment prices over a similar period.

Table XXXVI indicates that the arena-exhibit hall complex including the 1,400-stall garage will cost approximately \$26.8 million exclusive of land and miscellaneous unallocated allowances. The two theaters,

Table XXXIII

REPRODUCTION COSTS OF SELECTED THEATERS IF BUILT IN SAN FRANCISCO

Arizona State University Theater- Auditorium \$1,000 3,000	\$1,000	\$1,100
San Diego Civic Theater \$1,700 3,000 1965	\$1,700	\$1,700
O'Keefe Center Theater (Toronto) \$1,700 3,200 1960	\$2,100	\$2,700
Clowes Memorial Hall (Butler University) \$1,900 2,200 1964	\$2,100	\$2,200
Los Angeles Music Center Pavilion \$3,000 3,200	\$3,200	\$3,400
New York State Theater (Lincoln Center) \$7,000 2,700	\$6,000	\$6,300
Cost per seat <u>1</u> / Capacity Base year of cost	Reproduction cost in San Francisco at base year of cost	Reproduction cost in San Francisco, January 1965

1/ Including equipment and all fees but excluding land.

Source: Architectural Forum, records of facilities, and Economics Research Associates.

Table XXXIV

REPRODUCTION COSTS OF SELECTED ARENA FACILITIES IF BUILT IN SAN FRANCISCO

	Oakland Coliseum- Arena	Portland Coliseum	Los Angeles Memorial Sports Arena
Cost per permanent seat	\$677	\$600 <u>1</u> /	\$580 <u>1</u> /
Base year of cost	1963	1960	1959
Reproduction cost in San Francisco at base year of cost 1953-1963 annual increase in construction costs in San Francisco: 5.3 per cent	\$677	\$612	\$570
Reproduction cost in San Francisco, 1965 (per seat)	\$677 <u>×1</u> .1088 \$750	\$612 <u>×1.</u> 2946 \$792	\$570 <u>*1</u> .3632 \$777

Source: Financial records, Los Angeles Memorial Coliseum Commission; International Association of Auditorium Managers,

Auditoriums and Arenas; Kaiser Engineers' estimate of costs, Oakland Arena; Engineering News Record index of construction costs; and Economics Research Associates.

^{1/} Actual costs at time of completion excluding equipment and land, but including architects' and engineers' fees.

Table XXXV

COMPARATIVE CONSTRUCTION COSTS, SAN FRANCISCO GARAGES

Costs Per Stall Adjusted to Year of January 1965 Facility Actual Construction Costs $$4,500\frac{1}{}$ St. Mary's Square \$2,777 1954 Fifth and Mission 1,971 1958 2,550 Civic Center Plaza 3,700 3,080 1960 Sutter Stockton 3,948 1960 4,730 4,000 1962 4,230 Portsmouth Square 4, 1662/ Japanese Cultural Center 4, 166 3,0442/3,044 Golden Gateway

Source: City and County of San Francisco Parking Authority.

^{1/} Engineering News Record construction cost index.

^{2/} Construction bid.

Table XXXVI

COST ESTIMATE, SPORTS ARENA, CONVENTION-EXHIBIT HALL, AND 1, 400-STALL GARAGE $^{1}/$

Facility Cost \$10,850,000 750,000 \$11,600,000	\$ 6,222,000 250,000 \$ 6,472,000	\$ 3,640,000	\$ 349,400	\$22,061,400 2,206,100 2,478,600 78,200	\$26, 824, 300
Unit Cost \$775 per seat	\$20 per square foot	\$2,600 per stall	72/		
Basis of Estimate 14,000 seats Budget item	311,000 square feet gross building Budget item	1,400 stalls	16,000 persons per hour capacity and 52 feet of vertical rise	d equipment cost per cent Structures at 5.3 per cent per annum Equipment at 2.5 per cent per annum	
Sports Arena Structure Equipment Subtotal	Convention - Exhibit Hall Structure Equipment Subtotal	Parking Garage	Escalators	1965 structure and equipment cost Contingency at 10 per cent Cost escalation: Structures at 5.3 Equipment at 2.5	1967 total cost

Escalator costs based on cost factors developed by Marshall and Stevens and applied to Cost estimates include all fees but exclude construction financing charges. capacity required for sports arena activities.

Table XXXVII

2,200-SEAT AND 1,800-SEAT THEATERS, MUSEUM, AND 1,900-STALL GARAGE¹/

Facility Cost	\$ 4,950,000	\$ 5,500,000	\$ 4,050,000	\$ 4,500,000	\$ 4,940,000	1,875,000	\$16, 815, 000 1, 681, 500 1, 892, 700 58, 000	\$20,447,200
Unit Cost	\$2,250 per seat \$250 per seat		\$2,250 per seat \$250 per seat		\$2,600 per stall	\$25 per square foot	annum annum	
Basis of Estimate	2,200 seats		1,800 seats		1,900 stalls	75,000 square feet	d equipment costs per cent Structures at 5.3 per cent per annum Equipment at 2.5 per cent per annum	
Facility	2, 200-Seat Theater Structure Equipment	Subtotal	1,800-Seat Theater Structure Equipment	Subtotal	Parking Garage	Museum	1965 structure and equipment costs Contingency at 10 per cent Cost escalation: Structures at 5.3 Equipment at 2.5	1967 total cost

^{1/} Cost estimates include all fees but exclude construction financing charges.

museum, and 1,900-stall garage are estimated to cost approximately \$20.4 million, as noted in Table XXXVII, excluding miscellaneous improvements. It is, of course, possible to reduce costs per unit of capacity for either of the two complexes noted, but given the evidence of costs experienced by other cities, the cost bases appear quite realistic.

Unallocated costs consist principally of plazas over the garages. Table XXXVIII shows a preliminary engineering estimate of these costs supplied by the San Francisco Redevelopment Agency. Costs of street modification and utility relocation were not included, since these factors have an over-all benefit to the entire project area, and it is not reasonable to saddle public facilities with these expenses. The table also shows the portion of land cost to be charged to the public facilities based on an allocation of re-use value supplied by the Redevelopment Agency.

A summary of total project costs, including interest during construction, is shown in Table XXXIX, which indicates that project costs approximate \$53.2 million. Costs noted include all fees, contingencies, assumed cost escalations, and land values.

Given the scope of the project and its net income potentials, general obligation bond financing is the most appropriate method of funding. Revenue bond financing is infeasible, since the net revenue available for debt service (\$428,600) would be sufficient to cover capitalization of only about \$8.2 million under the optimistic circumstances of a 4.25 per cent yield to maturity, 40-year maturity, and no margin of safety or coverage needed to market the securities. Given the typical margin of safety or coverage required on revenue bond issues -- about 1.5 times income -- the income stream would probably cover about \$5.4 million of capitalization.

It is, of course, possible to split capitalizations between revenue and general obligation bond financing, but such a division would only increase the effective cost of debt service to the City. The City's general credit standing behind a general obligation bond would enable marketing such bonds at a cost unlikely to exceed 3.5 per cent effective cost over the period. Revenue bonds, on the other hand, would probably

Table XXXVIII

Cost estimates, other $\frac{1}{2}$

Plazas over garages	\$	613,600
Contingency at 10 per cent Architects', engineers', and inspection		61,400
fees at 7 per cent		42,000
Total miscellaneous construction	\$	717,000
Land $\frac{2}{}$ (block 3723) at 25 per cent of re-use value	\$1	,000,600
Land $\frac{2}{}$ (block 3734) at 100 per cent of re-use value	\$2	,693,700

Source: San Francisco Redevelopment Agency.

^{1/} All construction costs estimated by San Francisco Redevelopment Agency.

^{2/} Land costs chargeable to public facilities supplied by San Francisco Redevelopment Agency.

Table XXXIX

TOTAL PROJECT COSTS, YERBA BUENA CENTER

Sports arena, convention-exhibit hall, and 1,400-stall garage	\$26,824,300
2,200-seat and 1,800-seat theaters, museum, and 1,900-stall garage	20,447,200
Miscellaneous other construction	717, 100
Land (block 3723)	1,000,600
Land (block 3734)	2,693,700
Subtotal	\$51,682,900
Interest during construction (two years at 3.25 per cent)	1,560,400
Total project costs	\$53, 243, 300
Annual debt service (principal and interest at 3.5 per cent effective cost of money, 40-year period)	\$ 2,493,200
·	

require a coupon rate from 0.75 to 1.5 per cent higher. Thus, assuming the same maturity of issues, costs of the capital increment secured through revenue bond financing would be considerably higher.

Given the desirability of general obligation bond financing, the likely effective cost of money over the 40-year assumed term of life of the facilities is 3.5 per cent, based on information supplied by William Blair and Company. With this medium of financing, annual debt service requirements including retirement of principal would be \$2,493,200. Depending upon market conditions at the time of bond issuance, the needed funds might be obtainable either in a single issue, or spread among several issues with varying coupon rates and maturities. It is not likely that maturity could be extended beyond 40 years, or that effective interest cost would be lower than 3.5 per cent.

The City could, of course, finance the facilities through sale and leaseback transactions with a non-profit corporation established for that purpose. This would probably require an increase in effective cost of capital, since, although the City backs the credit of such a corporation, bondholders have traditionally asked for a premium above the general obligation rate. The increase in interest would probably range from 0.50 to 1 per cent. The principal advantage of such an arrangement is that submission of the project to the electorate for approval is not necessary. This medium of financing civic projects recently has come under severe criticism from the press, legislators, and taxpayer groups, with the charge levied of bypassing voter approval for questionable projects. In any event, such a course is not recommended for construction of the Yerba Buena Center complex of facilities, since economics alone are not as favorable as use of the general obligation bond.

Finally, San Francisco should be aware of the potentials of reducing required capitalizations through public subscription drives. That such private fund raising is indeed of consequence is amply demonstrated by both Los Angeles and New York in evolving the Music Center and Lincoln Center, respectively. In the case of the Music Center, 55 per cent of the needed \$33.9 million was raised through private donations. In New York, 65 per cent of the cost of Lincoln Center was provided by private sources and fund raising campaigns. Although San Francisco does not have the large population base of these cities, their funds came less from the general public than from community and business leaders donating heavily.

Appendix A

ECONOMIC OPERATIONS OF A 1,900-STALL GARAGE



Appendix Table A-I

SUMMARY OF SELECTED OPERATING FACTORS, 1,900-STALL GARAGE

Transient Parking Factors

Number of transient stalls Operating hours per day	1,540 14
Available transient stall hours	21,560
Operating utilization ratio	45%
Stall hours used per day	9,702
Stall hours used per year Average vehicle stay	2,959,110 3.1 hours
Number of vehicles parked per year	954,550

Monthly Parking Factors

Number of monthly stalls	360
Vehicle use days per month per stall	20
Vehicle use days per month	7,200
Vehicle use days per year	86,400

Appendix Table A-II

OF ALTERNATIVES OF FINANCING A 1, 900 - STALL GARAGE COMPARATIVE ECONOMIC COSTS TO SAN FRANCISCO

	Alternative A Revenue Bond Financ-	Alternative B Revenue Bond Financ-	
	ing With Facility	ing With Margin of	Alternative C
	Providing Its Own	Safety Secured from	General Obligation
	Margin of Safety	Other City Funds	Bond Financing
Transient stall hours of use			
per year	2, 959, 110	2,959,110	2, 959, 110
Rate required per hour	\$0.30	\$0.25	\$0.20
Income from transient storage	\$ 887,700	\$ 739,800	\$ 591,800
Monthly parkers per year	4,320	4,320	4,320
Rate	\$ 17.50	\$ 17.50	\$ 17.50
Income from monthly storage	\$ 75,600	\$ 75,600	\$ 75,600
Subtotalstorage income	\$ 963,300	\$ 815,400	\$ 667,400
Vehicle use days per yeartotal	1,040,950	1,040,950	1,040,950
Gross profit from gasoline, oil, and accessory sales (at \$0.03			
per vehicle)	\$ 31,200	\$ 31,200	\$ 31,200
Total income	\$ 994,500	\$ 846,600	\$ 698,600
Operating expenses at 45 per cent			
of storage income	\$ 433,500	\$ 366,900	\$ 300,300
Operating profit	\$ 551,000	\$ 479,700	\$ 398,300
Debt service	\$ 444,400	\$ 444,400	\$ 357,000
Net to City	\$ 106,600	\$ 35,300	\$ 41,300

Appendix Table A-III

CALCULATION OF PARKING RATE NEEDED TO SUPPORT REVENUE BOND GARAGE FINANCING

	Alternative $\frac{A^{1}}{}$	Alternative B2/	Alternative C3/
Estimated debt service	\$ 442,500	\$ 442,500	\$ 357,000
Margin of safety at 30 per cent	133, 300		
Revenue required to support the issue	\$ 577,700	\$ 444,400	\$ 357,000
Less: (a) Gross profit from monthly parking (b) Gross profit from prod-	\$ 41,600	\$ 41,600	\$ 41,600
uct sales	31,200	31,200	31,200
Operating profit required from transient parkers	\$ 504,900	\$ 371,800	\$ 284,200
Storage revenue required from transient parkers	\$ 918,000	\$ 675,600	\$ 516,700
Stall hours used per year	2, 959, 110	2, 959, 110	2,959,110
Parking rate per hour (transient)	31.02 cents	22.83 cents	17.46 cents
Suggested parking rate per hour (transient)	30.0 cents	25.0 cents	20.0 cents

^{1/} Based on a revenue bond issue (5 per cent, 40-year) and assuming the facility must generate sufficient net income to service debt and provide a surplus large enough to yield the margin of safety required to market the issue. Total project costs are \$7,592,200.

^{2/} Based on the same revenue bond issue, but assuming that the margin of safety would be provided by such other City funds as the parking meter fund.

^{3/} Assumes a general obligation bond issue (3.5 per cent, 40 years).



Appendix B

COMPARATIVE OPERATING PERFORMANCE, SAN FRANCISCO PARKING FACILITIES



Appendix Table B-I

SAN FRANCISCO GARAGES, FISCAL 1962-1963 SELECTED OPERATING STATISTICS,

oquare					yl/ irs	ırs		Per Vehicle		1 1	+	;	1
Portsmouth Square		503	800	117, 390	1.15/day1/ 2.9 hours	3.34 hours	24.0%	Per Stall		1 1	1	1	:
Ports				117,	1	8	2	Total		\$ 85,000	\$122,500	12,700	\$135,200
re					/ irs	r.s		Per Vehicle		\$0.97	;	0.222/	1
Union Square		822 324	1, 146	350	2.87/day 3.9 hours	11.19 hours	79.9%	Per Stall		\$851	1	155	\$867
Uni		-	1,	718, 350	2	11	7	Total		\$699,600 116,700	\$816,300	177, 400	\$993,700
cton					s H	r.s		Per Vehicle		\$0.76	1	0.062/	;
Sutter Stockton		832 100	932	086	2.39/day 3.0 hours	7.17 hours	51.2%	Per Stall		\$550	+	4	\$570
Sutte				605, 980	2	7	ζ.	Total		\$457,600	\$493,600	37,800	\$531,400
er					r s	ss H		Per Vehicle		50.67	;	0.032/	1
Civic Center		786 675	1,461	260	0.70/day 3.4 hours	2.38 hours	17.0%	Per Stall		\$143 164	1	∞	\$161
Civ		1	1,	168, 560	0	2	1	Total		\$112,400 110,900	\$223,300	11,200	\$234,500
ssion					ř.	E S		Per Vehicle		\$331 \$0.47 209	1	0.032/	1
Fifth and Mission		1, 385	1,583	640	2.30/day 3.1 hours	7.13 hours	96.09	Per Stall		\$331	+	21	\$337
Fifth		-, -	1,	972, 640	2	7	3	Total		\$458,600 41,400	\$500,000	32,900	\$532,900
	Operating Data	Transient Monthly	Total	Transient vehicles parked Transient stall turnover per	day (305-day basis) Average parking time Average daily occupancy	per stall (hours) Percentage utilization,	transient stalls		Revenue	Transient storage Monthly storage	Total storage Gross profit from product	sales	Total operating revenue

Adjusted for eight months of operation.
 Includes transient vehicles and estimated monthly vehicle days.

Source: City and County of San Francisco Parking Authority and Economics Research Associates.

Appendix Table B-II

COMPARATIVE PARKING STATISTICS SAN FRANCISCO GARAGES OPERATING UNDER CITY AND COUNTY PARKING AUTHORITY

	Autos	Parked	Increase	e-Decrease
Facility	1962-1963	1963-1964	Number	Percentage
Candlestick Park (autos)	366,732	327, 314	-39,418	-10.75%
Civic Center Garage	347, 204	354, 553	7,349	2.12
Fifth and Mission	1,028,064	1,078,085	50,021	4.87
Marshall Square	64, 308	73,533	9,225	14.35
Mission-Bartlett	160,419	145,870	-14,549	- 9.07
Portsmouth Square	199, 108	252,950	53,842	27.04
St. Mary's Square	380,717	387,090	6,373	1.67
Seventh and Harrison	63,811	79,950	16,139	25.29
Sutter-Stockton	644,053	706,134	62,081	9.64
Union Square	814, 988	831,230	16,242	1.99
Forest Hill	22,950	22,950		
Lakeside Village	57,500	57,500		

Source: City and County of San Francisco Parking Authority and Economics Research Associates.

Appendix Table B-III

OPERATING EXPENSE ANALYSES, SELECTED PARKING GARAGES, SAN FRANCISCO

		1962-1963 Fiscal	Year
	Fifth and		
	Mission	Civic Center	Sutter Stockton
Net Operating Income	532,900	234, 500	531,400
Total stalls	1,583	1,461	932
Operating Expense			
Payroll:			
Total	\$159,000	\$ 73,600	\$132,600
Per stall	100	50	142
Percentage of income	29.8%	31.4%	24.9%
All other expense:			
Total	\$ 62,900	\$ 40,100	\$ 56,400
Per stall	40	27	61
Percentage of income	11.8%	17.1%	10.6%
Total expense:	\$221,900	\$113,700	\$189,000
Per stall	140	77	203
Percentage of income	41.2%	48.5%	35.6%
		1961-1962 Fiscal	Year
Net Operating Income	\$425,100	\$203,200	\$454,900
Total stalls	1,283	1,461	932
Operating Expense Payroll:			
Total	\$139,600	\$ 71,200	\$125,600
Per stall	109	49	135
Percentage of income	32.8%	35.0%	27.6%

Appendix Table B-III (Continued)

1961-1962 Fiscal Year Fifth and Mission Civic Center Sutter Stockton All other expense: \$ 78,000 \$ 32,800 \$ 70,300 Total Per stall 61 22 75 18.3% 16.1% Percentage of income 15.4% Total expense: \$217,600 \$104,000 \$195,900 Per stall 170 210 71 Percentage of income 51.1% 51.1% 43.1%

Source: City and County of San Francisco Parking Authority and Economics Research Associates.

Appendix C

OPERATING DATA, PUBLIC FACILITIES THROUGHOUT THE UNITED STATES

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Appendix Table C-I

SEASONAL PATTERN OF CONVENTIONS IN THE UNITED STATES, 1964 (percentage)

All Conventions January 3.8% 3.1% July 4.3 February 4.2 August 6.8 10.1 March September 14.0 14.2 April October 12.6 November 9.8 May 12.7 December 4.4 June

Major Conventions 1/ 3.4% 4.7% January July 8.8 14.8 February August 9.3 10.2 March September 8.1 19.4 April October 2.7 November 9.5 May 5.9 December July 2.9

Source: Hendrickson Publishing Company, World Convention Dates; and Economics Research Associates.

^{1/} Those with attendance of 5,000 delegates or more.

Appendix Table C-II

SUMMARY OF COMPARATIVE RENTAL RATES, PUBLIC FACILITIES, SAN FRANCISCO BAY AREA

Cow Palace - San Francisco

Commercial sports 5-10 per cent of paid admissions

against minimums ranging from

\$400 to \$2,250 per day

Exhibits and shows 10 per cent of paid admissions

against minimums ranging from

\$1,000-\$2,000 per day

Flat fees ranging from \$500-\$700 per day

Miscellaneous events

Oakland Coliseum-Arena 1/
Commercial sports 10 per cent of paid admissions

Exhibits and shows \$500 flat rate

Miscellaneous events
(community service) \$400 flat rate

San Francisco Civic Auditorium

and Brooks Halls Flat rate basis per day

Main arena

Exhibits - \$900

Meetings - \$500 (all day)

Main floor corridors - \$200

Polk and Larkin Halls

Exhibits - \$200

Meetings - \$100

Corridors (second floor) - \$100

Third and fourth floor

Meeting rooms (either

side) - \$100 (all day)

Brooks Hall

Full hall - \$1,000

One-half hall - \$500

\$500 in and out

\$300 in and out

\$250 in and out

1/ Proposed rate.

Source: Records of indicated facilities, Real Estate Research Corporation, and Economics Research Associates.

Appendix Table C-III

MAJOR FACILITIES IN THE UNITED STATES AND THEIR EXHIBIT SPACE CAPACITY

City	Facility	Size (square feet)
Chicago	International Amphitheatre McCormick Place	585,000 490,000
Detroit	Cobo Hall	400,000
Atlantic City	Auditorium and Convention Hall	327,000
Philadelphia	Trade and Convention Center	315,000
New York	Coliseum Kingsbridge Armory	301,000 180,000
Louisville, Kentucky	Fair and Exposition Center	264, 500
Cleveland	Public Auditorium	250,000
Dallas	Market Hall Memorial Auditorium	212, 400 110, 000
Los Angeles	Sports Arena Great Western Exhibit Center Shrine Auditorium Pan Pacific Auditorium	195,000 140,000 101,000 100,000
Baltimore	Civic Center	160,000
Boston	War Memorial Auditorium	154,000
Greenville, South Carolina	Textile Hall	157,000

Appendix Table C-III (Continued)

C'A	r> '1'4	Size
City	<u>Facility</u>	(square feet)
St. Louis	Kiel Auditorium	143,000
Miami Beach	Convention Hall	137,000
Washington, D. C.	National Guard Armory	136,000
Houston	Sam Houston Coliseum	133,000
Milwaukee	Auditorium-Arena	120,000
Indianapolis, Indiana	State Fairground Coliseum	120,000
Las Vegas, Nevada	Convention Center	119,000
Tampa, Florida	Curtis Hixon Memorial Hall	110,000
Portland, Oregon	Memorial Coliseum	108,000
Seattle, Washington	Seattle Center	95,000

Source: Billboard Publishing Co., Arena Auditorium and Stadium Guide, 1964.

Appendix Table C-IV

LOS ANGELES MEMORIAL SPORTS ARENA, 1964 ADJUSTED OPERATING EXPENSES,

	Actual	Reimbursable	Net	Operating Cost Ratios 1/	Percentage Estimated as Fixed Costs	Fixed Costs 1/
Salaries and wages	\$114,000	\$ 39,400	\$ 74,600	17.7%	100.0%	\$ 74,600
Materials and supplies	14, 100		14,100	3.5	75.0	10, 600
Utilities	42,300	;	42,300	10.0	50.0	21,200
Public address system	17,500	17,500	1 1	ł	;	1
Rental equipment	300	300	1	:	1	1
Repairs and maintenance	48,300	2,500	45,800	10.8	75.0	34,400
Insurance	38,200	21,200	17,000	4.0	100.0	17,000
Advertising and publicity	1	1	1 1	1 1	;	;
Traveling	400	;	400	0.1	100.0	400
Miscellaneous	6,400	ł	6,400	1.4	100.0	6,400
Retirement systems	4,700	1	4,700	1.1	100.0	4,700
Audit	1,900	1 1	1,900	0.4	100.0	1,900
Contract services:						
Maintenance	161,500	8, 100	153,400	36.3	25.0	38,400
Event staff	75,500	75,500	1	;	;	1
Miscellaneous	5,200	:	5,200	1.2	75.0	3,900
Rental (6th agricultural district)	10,000	;	10,000	;	!	;
Contingency		1	1	1	1 1	1
Subtotal	\$540,300	\$164,500	\$375,800	;	;	;
Equipment depreciation <u>2</u> /	57,200	1	57,200	13.5	100.0	57, 200
Total	\$597,500	\$164,500	\$433,000	100.0%	71.4%	\$270,700

Variable costs per event $\frac{3}{2}$ = \$750. Variable costs per attendee $\frac{3}{2}$ = \$0.086 Total net costs 1 less fixed costs = variable costs = \$152,300

Source: Los Angeles Memorial Coliseum Commission and Economics Research Associates.

Calculated to exclude ground rent. 13151

Depreciation is shown as adjustments to capital accounts on Sports Arena records.

Based on 1964 event calendar (203 event days, 1,779,600 attendees).

